

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1728.—Vol. XXXVIII.

LONDON, SATURDAY, OCTOBER 3, 1868.

{STAMPED...SIXPENCE,
{UNSTAMPED...FIFTEEN

MR. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 1842.)

HOLDERS of mining shares difficult of sale in the open market may find purchasers for the same through Mr. CROFTS' agency. Also parties requiring advice how to act in the disposal or abandonment of doubtful mining stocks may profitably avail of Mr. CROFTS' long experience on the market in all cases of doubt or difficulty, legal or otherwise.

WHEAL BASSETT and CHIVERTON have risen considerably—the former are now £67½, £70, and the latter £2½. SPECIAL BUSINESS in the above, and advice given whether to sell or hold at the present prices.

MR. JOHN BUMPUS, 44, THREADNEEDLE STREET,
has FOR SALE the following shares, free of commission:—
50 Anglo-Brazilian, 11s 6d
50 Australian United (Gold), 17s 6d
30 Chontales, £2 7s 6d
25 Chiverton, £2 7s 6d
15 Clifford, 22s
20 Chiv. Moor, £2 16s 3d
35 Don Pedro, £2 6s 3d
50 Drake Walls, 7s 6d
15 East Caradon, £2 13s
30 East Grenville, £2 13s
50 E. Carn Brea, 8s
100 Frontino, 14s 6d
BUYER of Carn Camborne, East Seton, and Marke Valley. Sellers please state lowest price.

MR. W. L. WILKINSON, STOCK AND SHAREDEALER,
No. 29, THREADNEEDLE STREET, LONDON, E.C.

MR. G. D. SANDY, STOCK AND SHAREDEALER,
No. 48, THREADNEEDLE STREET, LONDON, E.C.
TAMAR VALLEY.—My advice is, buy these shares. Full particulars on application.

MESSRS. WILSON, WARD, AND CO.,
STOCK AND SHAREDEALERS,
16, UNION COURT, OLD BROAD STREET, LONDON, E.C.
BUYERS of New Great Consols shares.

JOHN RISLEY, (SWORN) STOCK AND SHAREBROKER,
48, THREADNEEDLE STREET, LONDON, E.C.
Business transacted in the British Funds, Railway and other Stocks, Foreign Bonds, &c., on the usual commission, 1½ per cent. on mining and other shares, above £2; and at £2 and under 6d. per share.
EAST WHEAL GRENVILLE MINE is likely to prove a great prize. Shareholders are recommended to hold on their shares, which are in demand at £2 15s.
Bankers: London and Westminster, Lothbury.

MR. THOMAS SPARGO, STOCK AND SHAREDEALER,
224 & 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

MR. JAMES HUME, STOCK AND SHAREDEALER,
74, OLD BROAD STREET, LONDON, AND MINING EXCHANGE.
Closing prices:—
Chiverton £ 2¼ to 2½
Prince of Wales 40s to 42s
Chiverton Moor 5½ to 6s
Wheal Mary Florence 1½ to 1¾
Mr. HUME can recommend shares which are certain to rise 200 to 300 per cent.
Mr. H. sends a daily list of stocks and shares to subscribers.
WHEAL MARY FLORENCE.—Full particulars of this rising mine on application to Mr. HUME. Every description of share negotiated.
Bankers: The London Joint-Stock Bank.

BARTLETT AND CHAPMAN, STOCK AND SHAREDEALERS,
2, BUCKLEBURY, LONDON, E.C.
LOVELL CONSOLS.—This mine continues to improve, the lode being now worth £30 per fathom. We are desirous our friends and clients should secure an interest without delay. It is beyond doubt that this will be a valuable mine when the lode is cut in level. Shares must have a great rise in price. Specimens of the tin from the adit level can be seen at our office, and plans of the district can be had on application.

BARTLETT AND CHAPMAN'S "INVESTMENT CIRCULAR AND FINANCIAL RECORD" for September is now ready, and contains a résumé of the Financial Business of the months of July and August, Meetings of Dividend and Progressive Mines, Bank Returns, Interesting Articles on Lovell Consols, Great South Chiverton Mines, and the Recent Gold Discoveries in Queensland and South Africa.
Post free on application.
2, Bucklebury, London, E.C.

JAMES SCOTT AND CO., STOCK AND SHAREDEALERS,
14, PINNER'S HALL, OLD BROAD STREET, LONDON, E.C.
J. S. and Co. are BUYERS and SELLERS, for cash or the account, of shares in any of the undermentioned mines, at quoted or intermediate prices (free of commission):—
Anglo-Brazilian 10s to 11s 3d
Bedford Consols 10s to 11s 3d
Chontales £ 2¼ to 2½
Chiverton 2¼ to 2½
Chiverton Moor 5½ to 6s
Don Pedro 3 40 to 3 53
East Caradon 3½ to 3¾
East Carn Brea 6s to 7s
East Grenville 6½ to 7s
East Lovell 2¼ to 2½
Frontino and Bolivia 13s to 15s
Great Laxey 18½ to 19½
Great Wheal Vor 11½ to 12
Lucy Phillips 1½ to 2
Marke Valley 7½ to 7¾
North Treskerby 6s to 8s
North Wheal Crofty 1¼ to 1½
Pestarena 1½ to 2
Yudanamutana 2 18 9 to 3 1 3
Port Phillip £110s to £111 3
Prosper United 5s to 10s
Prince of Wales 40s to 41s 6d
Princess of Wales 2s to 3s
Rossa Grande 16s 6d to 19s
S. Condurow (call pd.) 1¼ to 1½
St. John del Rey 18½ to 19½
West Chiverton 60 to 62
West Prince of Wales 7s to 9s
Wheal Agar 7½ to 1
Wheal Buller 5 to 7
Wheal Emily Henrietta 27 to 28
Wheal Grenville 1½ to 1¾
Wheal Seton 4s to 4½
Wheal Uny 1¼ to 1½
Worthing 3½ to 4
Yudanamutana 2 18 9 to 3 1 3
Money advanced on marketable mine shares at 5 per cent. per annum.
J. S. and Co. having in their employ several of the most experienced and trustworthy mine agents in the United Kingdom, who periodically inspect their behalf all the bona fide mines in Devon, Cornwall, and Wales, are enabled to accord to their friends and clients reliable advice as to the present and future prospects of mines they deem worthy the attention of investors.
References will be given to the Alliance Bank and the Bank of England.
J. S. and Co. can recommend several good low-priced shares likely to rise considerably in value within a few months.

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S,
BISHOPSGATE STREET, LONDON, E.C. (Established 14 years), has FOR SALE the following SHARES, at net prices:—
20 Bedford Unit., £1¼
20 Bedford Cons., 12s 6d
40 Calbeck Fells, 10s 6d
10 Chiverton, £2½
30 Chiverton Moor, £2½
30 Chontales, £2 4s 6d
20 Don Pedro, £2 9 pm.
50 Drake Walls, 8s 3d
10 East Caradon, £2 3 9
30 E. Grenville, £2 3s 9d
10 East Lovell, £2½
50 Frontino, 14s 6d
50 Glan Alun, 12s call pd
5 Great Laxey, £18 3s 9d
20 Gt. Retallack, £23 3s 9d
5 Great Vor, £11½
10 Marke Valley, £7 11 3
Minera, £17½
20 New Lovell, 10s 3d
30 No. Downs, 13s 9d
30 No. Treskerby, 7s 9d
30 No. Crofty, £1 6s 9d
30 Prince of Wales, 40s 9d
20 Pestarena, £1½
30 Port Phillip, £1 9s 3d
40 So. Condurow, 8s 9d
20 So. Herodsfoot, 23s 9d
5 St. John del Rey, £19½
20 Tamar Valley, 11s
5 Tincroft, £12 18s 9d
50 Wh. Crebor, 3s 9d
20 Wheal Uny, 30s
30 West Caradon, £2½
30 West Great Work, 22s
20 Wh. Grenville, 22s 6d
1 West Chiv., £61 8s 9d
20 W. Pr. of Wales, 7s 9d
25 Kitty (St Agnes), £2½
3 Wh. Mary Ann, £17½
2 Wheal Seton, £2½
1 West Frances, £25½
20 Yudanamut., £2 15s
And is a BUYER of Wheal Chiverton, Tamar Valley, and West Godolphin.

MR. GEORGE BUDGE, STOCK AND SHAREDEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 20 years), is a SELLER of the following shares at net prices:—50 Royalton; 140 West St. Ives; 3 Minera, £180; 50 Calbeck Fells, 11s; 20 Great South Chiverton, 17s 6d; 25 Wheal Grenville, 23s 6d; 20 North Retallack, £2½; 100 Crebor, 3s 6d; 10 Wheal Chiverton, £2½; 100 West Tremayne, 6s 6d; 20 Ross and Chiverton; 90 Tamar Valley; 10 West Caradon, £2½; 2 Wheal Seton, £20; 100 South Grenville, 4s; 50 Okel Tor, 17s 6d; 45 East Seton, 16s 9d; 35 Wheal Uny, £1¼; 40 East Rosewarne, 8s 9d; 60 North Downs; 100 Gwydyr Park, 4s; 60 Fido-an-dra, 17s 6d; 100 Frontino and Bolivia, 14s 6d; 100 Anglo-Brazilian, 10s 9d; 100 Sao Vicente; 60 Worthing, 10s; 200 General Brazilian, 2s, prem.; 70 East Chiverton.
SPECIAL BUSINESS in West St. Ives, Devon Great Consols, Maes-y-Safn.

CORNISH AND DEVON MINES.—
FOREIGN MINES.

PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," of Friday, Oct. 2, No. 499, Vol. X., price 6d. each copy, forwarded on application, contains information on the following mines:—
West Chiverton. Wheal Grenville. Frontino and Bolivia.
Chiverton. West Caradon. Chontales.
North Wh. Chiverton. Drake Walls. United Mexican.
West Great Work. West Drake Walls. Yudanamutana.
Great Work. East Grenville. Don Pedro.
Botallack. Tincroft. Linares.
Trumpet Consols. New Wheal Lovell. Port Phillip.
East Trumpet. Wheal Trelawny. Capula.
East Wheal Lovell. Rossa Grande. Pestarena.
Frank Mills. North Wheal Crofty. St. John del Rey.
With Leading Articles on the Mining Share Markets, the Price of Tin, Tin Mines, &c., Advance in the Copper Standard, &c.

INVESTMENT OR SPECULATION.—A SELECTED LIST OF
RAILWAYS, BANKS, MINES, COLONIAL SECURITIES, FOREIGN GOVERNMENT BONDS, &c., forwarded to bona fide investors on application, in addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.

PETER WATSON, STOCK AND SHAREDEALER,
79, OLD BROAD STREET, LONDON
(three doors only from Hercules-passage, entrance to the Stock Exchange).
Twenty-three years' experience.
Bankers: The Alliance Bank, and the Union Bank of London.
References given and required (when necessary) in all the principal towns of the United Kingdom.

THE LONDON DAILY RECORD—STOCK AND SHARE
LIST—STOCK EXCHANGE SECURITIES. Published every evening at 5 o'clock. It contains the latest prices of railways, banks, mines, foreign stocks and bonds, financial, insurance, and miscellaneous shares, remarks on the daily rise and fall in prices, with advice as to purchase and sales. Annual subscription, 1s.; by post, £2 2s.; monthly subscription—by post, 4s.; single copy, 1d. by post, 2d.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

CALDBECK FELS MINES.
In next week's "Circular" I shall give some details with respect to these mines.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

MR. EDWARD COOKE,
FOREIGN AND BRITISH STOCK AND SHAREDEALER,
76, OLD BROAD STREET, LONDON, E.C.
Deals in all kinds of Foreign Stocks, and the shares of the various Gold Mines, also in the best Dividend and Progressive Mines.
A Price List sent free on application.
Bankers: Alliance Bank.

MR. W. H. CUEL,
No. 42, CORNHILL, LONDON, E.C.

WALTER TREGILLAS, 122, BISHOPSGATE STREET
WITHIN, LONDON, E.C., DEALS IN ALL STOCKS AND SHARES,
either for cash or the fortnightly settlement.
Bankers: The Alliance Bank.

MR. WILLIAM SEWARD, STOCK AND MINING SHARE
BROKER, 19, THROMMORTON STREET, LONDON, E.C.
Every description of shares BOUGHT and SOLD at the best market price.

MR. JOHN MOSS, STOCK AND SHAREDEALER,
76, OLD BROAD STREET, LONDON, E.C.
Has BUSINESS as BUYER or SELLER in all British and Foreign Mines.
SPECIAL BUSINESS in Calbeck Fells, Chiverton, Chontales, Frontino, North Treskerby, Prince of Wales, and Rossa Grande.
Bankers: City Bank, Finch-lane, E.C.

MR. C. A. POWELL, SHAREDEALER, 78, OLD BROAD
STREET, LONDON, E.C.
Transacts BUSINESS as BUYER or SELLER in the various shares currently dealt in at net prices.
Parties dealt with at a fair margin on the market price.
SPECIAL BUSINESS in Calbeck Fells, Chiverton, Frontino, Prince of Wales, and North Treskerby.
Bankers: City Bank, Finch-lane.

MESSRS. WARD AND JACKMAN,
STOCK AND SHAREDEALERS,
No. 1, CUSHION COURT, OLD BROAD STREET, CITY, E.C.
Members of the Exchange.

Closing prices, Friday Evening, Oct. 2.
Bedford United £ 1¼ to 1½
Chontales 2¼ to 2½
Chiverton 2¼ to 2½
Chiverton Moor 5½ to 6s
Devon Great Consols 37s to 39s
Don Pedro 3½ to 3¾
East Caradon 3½ to 3¾
East Lovell 2¼ to 2½
Great Laxey 17½ to 18½
Great Retallack 3 to 3½
Great Wheal Vor 11 to 11½
Herodsfoot 40 to 42
Marke Valley 7½ to 7¾
North Wheal Crofty 1¼ to 1½
Prince of Wales 40s to 42s
Messrs. WARD and JACKMAN are DEALERS in all the above at the close market prices of the day.
Messrs. WARD and JACKMAN will forward a correct list of closing prices and statistical information GRATUITOUSLY on application.
Messrs. WARD and JACKMAN have SPECIAL BUSINESS in Brynystro, Mine, at £2 per share net.
Oct. 2. Bankers: London and Westminster, Lothbury.

MATTHEW GREENE, STOCK AND SHAREDEALER,
1, ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.
TAMAR VALLEY.—The main features are as follows:—
1.—All preliminary work has been done.
2.—Two fine silver-lead lodes are already discovered; the ore is very rich, containing from 75 to 100 oz. of silver to the ton.
3.—The mine is supplied with all necessary machinery. The new engine goes to work at the end of this month, and the agent reports that as soon as the mine is in full good profits, which mean good dividends, will be at once made. The facts will, I think, justify me in recommending the purchase of the shares.

INTENDING INVESTORS.—The "FINANCIAL GAZETTE,"
published by Mr. Y. CHRISTIAN, should be consulted with a VIEW to the SAFE EMPLOYMENT OF CAPITAL. It contains Original Articles, a Review of the Money Markets, and a selection of investments paying 10 to 17 per cent., and such information as is necessary to guide intending investors.
6, Bond-court, Mansion House, London, E.C.
Bankers: Bank of England.

CHONTALES GOLD COMPANY.—FULL PARTICULARS
OF THE DIFFERENT CLASSES OF SHARES can be obtained on application to Mr. J. H. MURCHISON, No. 8, Austinfrasers, E.C.

INVESTMENT, LOAN, AND BANK AGENCY.
Established 1839.
Attention is invited to the system adopted by this Agency, which offers peculiar advantages to Investors.
English and Foreign Public Securities of every description Bought and Sold, in any quantities, at the current quotations of the day, free of Commission.
LOANS granted, for one year or any shorter period, on Stocks and Shares having a market value.
FIVE PER CENT. INTEREST allowed upon DEPOSITS of all amounts withdrawable at one month's notice.
Bank and Finance Agency Business generally undertaken.
RICHARD TAYLOR AND COMPANY.
No. 12, Clement's-lane, Lombard-street, London, E.C.
N.B.—No commission whatever with any other office.

MR. CHARLES THOMAS,
MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER,
3, GREAT ST. HELEN'S, LONDON, E.C.

Third Edition, price One Shilling; post-free, fourteen stamps.
MINING FIELDS OF THE WEST:
A PRACTICAL EXPOSITION OF THE PRINCIPAL MINES AND MINING DISTRICTS OF CORNWALL AND DEVON.
Published by CHARLES THOMAS, At No. 3, Great St. Helen's, London, E.C.

MESSRS. LANE AND GIBBS, 2, ROYAL EXCHANGE,
LONDON, E.C. (Members of the Mining Exchange), STOCK AND SHAREDEALERS, transact business in all kinds of securities at closest net prices for cash or account.
Bankers: London and County Bank.

MR. E. J. BARTLETT, STOCK AND SHAREDEALER,
3, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.

MR. E. J. BARTLETT, STOCK AND SHAREDEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C., has SPECIAL BUSINESS as a BUYER or SELLER of shares in West Godolphin, Summer Hill, North Pool, and New Lovell.
E. J. B. deals in every description of Mining, Insurance, and other Stocks and Shares, and invites transactions from holders of stock difficult of sale in the open market.

MR. J. B. REYNOLDS, STOCK AND SHAREDEALER,
70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.
Established Eleven Years.
Bankers: City Bank.

References exchanged in any part of the United Kingdom. Parties of well-known respectability can have stock prior to payment if desired.

Established Twelve Years.
MR. FREDERICK WM. MANSELL, 44, THREADNEEDLE
STREET, LONDON, is in a position to deal in all marketable shares quoted on the last page of this day's Journal, and has FOR SALE the following, free of commission:—

35 Chiverton, £2½	30 Lovell Consols, 12s 6d	10 East Caradon, £3¼
5 Cargill, £20½	50 Chontales (gold), £2¼	6 South Basset, £2½
50 Drake Walls, 7s 6d	60 Frontino (gold), 15s	10 East Lovell, £2½
100 E. Grenville, £2 12s 6	10 St. John del Rey (gold), £19½	25 Herodsfoot, 20s
70 Prince of Wales, £2½	5 W. Chiverton, £20½	150 Yudanamut., £3½
3 Wheal Seton, £50	50 Chontales, £2½	60 City of Moscow (gas), £6¼
1 New Seton, £52½	50 Wh. Grenville, £1¼	5 Cape Copper, £12¾
50 Redmoor, 6s	5 Great Laxey, £17½	
5 Wh. Kty. (Lelant) £5	15 West Caradon, £2½	

Mr. MANSELL is a BUYER of Tamar Valley, Frank Mills, and Great South Chiverton. Sellers will please state number of shares and lowest price.
A daily list of closing prices will be sent on application.
All orders for the account must be accompanied by a reference.
Oct. 2, 1868. Bankers: London Joint Stock Bank.

MR. THOMAS THOMPSON, MINING OFFICES,
12, OLD JEWRY CHAMBERS, LONDON, E.C.

ROYALTON.—Mr. THOMPSON calls attention to a report on this property, which will be found in its proper place in the columns of the Journal. Capt. W. Kitto lately inspected the mine, and Capt. Seccombe in speaking of his visit says—"Capt. Kitto was very much pleased with Royalton, and fully agrees with me that it may be looked upon as a property, not a speculation."
Mr. THOMPSON recommends all those looking out for a safe and lucrative investment to visit Royalton, and see for themselves. The nature of the undertaking is such that common sense and ordinary intelligence will be sufficient to enable them to appreciate its value.

MR. T. ROSEWARNE, 81, OLD BROAD STREET,
LONDON, E.C.
T. R. has BUSINESS in the following shares, and SPECIAL BUSINESS in those marked *.

*Chontales.	*North Downs.	West Chiverton.
*Devon Consols.	*North Roskear.	Wheal Buller.
*East Basset.	*Prince of Wales.	Wheal Grenville.
*Frontino and Bolivia.	*Rossa Grande.	Wheal Seton.
*Marke Valley.	*St. John del Rey.	*Yudanamutana.

BEDFORD CONSOLS.—T. R. is a BUYER of any number of these shares at market prices for cash or time on; also of West Maria and Fortescue, Chiverton Moor, East Carn Brea, Bedford United, and Calbeck Fells.
Wheal Chiverton shares have recently risen from a few shillings to £3 and £4 per share. Shares is mining; no one knows what an hour may bring forth, at the stroke of a pick, or the blast of a hole.
CHIVERTON MOOR is looking better in the 75 west. Shares should be bought immediately at present price.
Money lent upon good mining shares.
Bankers: Bank of England. Office hours 10 to 4.

MR. J. H. COCK, STOCK AND MINING SHAREDEALER,
74, OLD BROAD STREET, LONDON, E.C.
Fifteen years' experience in Cornwall and London.
J. H. C. deals in all classes of Stocks and Mining Shares at close market prices net to the buyer or seller.

FIXED PRICES VERSUS PRIVATE CIRCULARS.
MR. HENRY MANSELL,
44, THREADNEEDLE STREET, E.C., has FOR SALE, at net prices, the following shares:—

20 Frank Mills, £2.	3 West Chiverton, £61.	50 Prince of Wales, 42s.
50 Wh. Grenville, 23s 6d	30 North Downs, 12s.	40 No. Treskerby, 8s.
30 E. Grenville, £2 13s 9	20 Chontales, £2 6s 3d.	50 Lovell Consols.
15 Chiv. Moor, £6 16s 3d	25 Tamar Valley, 11s.	50 East Chiverton.
40 Chiverton, £2 7s 6d	15 G. Retallack, £3 2s 6d	30 Yudanamut., £3 1s 3

Bankers: London Joint-Stock Bank.

MR. THOMAS THOMAS,
ASSAYER, &c.,
COPPER ORE WHARVES, SWANSEA.

RAILWAY SHAREHOLDERS, or those thinking of becoming so, should read HANNAM and Co.'s JUNE CIRCULAR, free by post from either of their offices, 449, Strand, London, W.C., or ROYAL INSURANCE BUILDINGS, MANCHESTER.

FOREIGN STOCKHOLDERS, or those thinking of becoming so, should read HANNAM and Co.'s JUNE CIRCULAR.
ANGLO-AMERICAN OR ATLANTIC CABLE STOCKS.—All interested in these undertakings, or about to become so, should read HANNAM and Co.'s MARCH and APRIL CIRCULARS, as well as JUNE CIRCULAR.
GOLD AND SILVER MINING.—All interested, or wishing to become so, in undertakings of this character, should read HANNAM and Co.'s JUNE CIRCULAR. Investments may now be made on peculiarly favourable terms in Idaho and Nevada respectively, the richest gold and silver producing districts as yet discovered. The properties noted have been carefully selected and reported on by tried and well-known English agents, and will yield early returns.—Full particulars with JUNE CIRCULAR on application.

MISCELLANEOUS SHARES.—All investors with spare capital and capable of taking advantage of the opportunities afforded by a panic-stricken community, should make careful selections of shares now selling at far below their real value. For particulars see HANNAM and Co.'s JUNE CIRCULAR, which may be had at either of their offices, 449, Strand, London, W.C., exactly opposite Charing-cross Station and Hotel, or at Royal Insurance Buildings, Manchester.

MR. EDWARD BREWIS, STOCK AND SHAREDEALER,
84, OLD BROAD STREET (two minutes' walk from the Bank of England) and 93, BISHOPSGATE STREET WITHIN, LONDON, E.C., can confidently RECOMMEND the FOLLOWING SHARES, either for INVESTMENT or SPECULATION, and, having no fixed prices to them, he is prepared to deal on the best terms with those who honour him with their confidence. Any instructions with limit he may be favoured with shall have instant attention, and he believes that at no period of mining enterprise were there such times for the buyers' advantage.

COPPER MINES.—North Treskerby, East Carn Brea, East Seton, Wheal Seton, Tin Mines.—Royalton, Lovell Consols, West Godolphin, East Lovell.
GOLD MINES.—Frontino and Bolivia, Don Pedro, Port Phillip, Lucy Phillips.
LEAD MINES.—West Chiverton, Cargill, Cashwell, Wheal Mary Ann.
DEALER in every description of mine shares, cash or account.
Daily price-list sent, with latest quotations, post-free on application.

IMMENSE SAVING OF LABOUR.

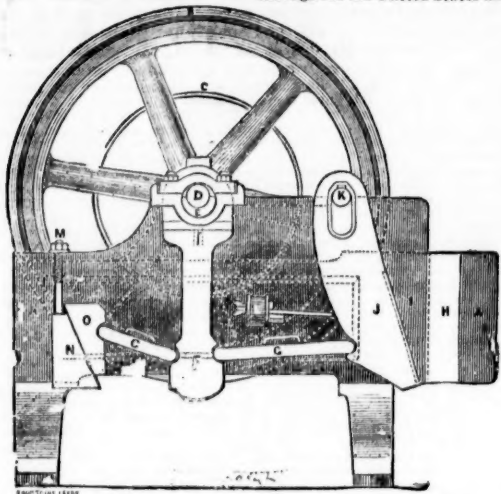
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, MCADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER,

OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour. For the Parys Mining Company, JAMES WILLIAMS.

H. R. Marsden, Esq.

Elton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaws about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery. For the Parys Mining Company, THOS. GOLDSWORTHY & SONS.

H. R. Marsden, Esq.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton. JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or \$75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,

MEADOW LANE, LEEDS,

ONLY MAKER IN THE UNITED KINGDOM.

CAUTION!**BLAKE'S PATENT STONE BREAKER,**

In Chancery.

BLAKE v. ARCHER, NOVEMBER 12, 1867.

His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE'S, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

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H. R. MARSDEN, SOHO FOUNDRY, MEADOW LANE, LEEDS.

PARIS EXHIBITION, 1867.

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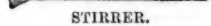
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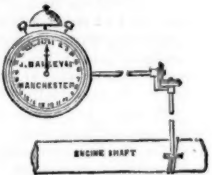
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Original Correspondence.

SUMMARY OF LETTERS ON THE LABOUR QUESTION.

SIR.—A few general deductions and reflections will close and sum up the results of this series of letters. It is manifest that there is no hope for any Trades Union, however wisely and comprehensively planned, working well, unless its leaders and managers have a fair share of honesty and ability, and its members know what are really their true interests, and are earnest in their efforts to carry out each in his allotted place and sphere, and to the best of his ability, the directions of their managers for the common good—working in a spirit of cordiality and agreement. The best institutions are fruitless in producing good—nay, will often, on the other hand, work evil, if administered by idle, selfish, unscrupulous, or incompetent hands. Hitherto the oppressions noticed in the first of these letters have stamped their character upon Trades Unions. Originally under the ban of the law, fighting the battle of men bowed down by unfair legislation, they were almost forced into extremities of hostility against their employers generally, and of coercion of their fellow-workmen, often flinching from no deed, whether of crime or danger, which appeared absolutely required to insure their success. But now, when the workers have attained their proper position and influence in the community, longer adherence to these noxious principles, and submission to the unworthy leaders enforcing them, would prove the members to be wholly unworthy of the confidence reposed in them, and of the franchise lately granted to them. No man can be trusted to join in making laws affecting the liberties of others who cannot guard his own, and who submits to the tyranny of a Union too often little, if at all, better in its working than the camorra which grinds the Italian lazzaroni to the lowest depth of poverty and suffering. Let our working men be no longer kept down by some of the worst of their order. Let them call to their head and follow those who, from knowledge, sagacity, and good character, are really able to guide them aright. Above all, let them rest well assured that no present relief or lifting up in the future can in any way be obtained for them from such dreamy folly as was vented in the Brussels meeting of the International Congress of Working Men.

Putting aside for the moment all discussion as to the right and justice of remodelling society and redistributing property, they cannot but see that the thing is an utter impossibility, such as could only have entered into the heads of insane theorists and crackbrained riders of their own hobbies, who have lost all power of distinguishing between their castles in the air and actual realities. Truly, if the working men are to wait until any help reaches them from this quarter they may make up their minds to remain as they are, in the forcible phrase of the Yankees, "from July 'till eternity." As little can they expect any sufficient help from co-operation. Let those who believe in it by all means try it out fairly, and let us wish all good fortune to their experiment. But if it is at all extensively adopted there will assuredly be far more failures than successes in these societies, proving that they can never replace private enterprise, or abolish masters as a class, or in any way materially affect their relation to the workpeople they employ. It may be counted upon as an actual certainty that the wheels of social intercourse will continue to run on pretty much in their old grooves, and employers and employed remain for our time, and that of our children after us, to work together and settle their mutual intercourse by argument or difference, as they have heretofore done. This being so, their best hopes will be found in that general prosperity of the country which alone can pay good wages and profits, and in their own intelligence and education, with the aid of good Trades Unions, on the basis of mutual good understanding for securing prosperity to the masters, and to workmen the best wages their trade can afford, with every attainable comfort in their work, as well as in their homes.

We are approaching a critical point in the productive and manufacturing history of our country. The very blessings which increase the wealth of all our customers—continuance of peace and comparatively good government over a large part of Europe—help to bring a number of competitors forward to strive with us for the lead we have so long held in manufactures and trade—many of them from quarters hitherto wholly unnoticed. I have full confidence in the power of the combined capital, skill, and energy of my countrymen to keep the field against all rivals, if they only allow themselves something like fair play, and do not needlessly carry heavy weights in the race. These qualities and advantages ought to secure us something like a natural monopoly of the highest class of work always commanding the highest rate of wages; leaving all work of the lowest kind, with the lowest wages, to be taken by our foreign competitors, where they succeed in depriving us of anything. But to make this position safe, our working class must avoid, by turbulent and ill-considered interference and unreasonable demands, making this best work so uncertain and expensive as to invite the attempts of other nations to rival and underbid us. Here has hitherto been the great error of the Trades Unions of our workmen. Had they wisely read the signs of the times, they would not, by ill-considered demands and strikes, have driven away (as was done with the iron shipbuilding of the Thames) important branches of manufacture, yielding high wages, which, once lost, very rarely return to the place they have left. In this instance we see too mournfully what wide-spread pauperism and misery this fatal error has caused. Let the Unions learn wisdom from this sad example, and let all their actions and regulations be devoted to securing for good workmen the best wages the trade can afford, and rest content with these. Let them, to keep these wages at the highest point, keep well up the high standard of English work. If there is a glut of labour, and numbers have to be thinned by emigration, let the lowest class of workmen go—if any go—at the expense of the Unions; this is their only chance for permanently securing high wages. Their present policy can only end in driving the best paying manufactures away; and, finally, leaving them worse off than they are at present, whereas if they can only be wise in time, and profit by the improvements of the age, they have before them the fair prospect of such a state of well being and comfort as has never hitherto been enjoyed by English workmen, even in the best times of which we have any record. Ample shall I feel myself paid for the thought and time I have given to these letters if anything here written tends to such a happy result. They have many amongst them, and around them, well able to impart the fruit of sound practical knowledge; many, who having by sheer ability and energy raised themselves in the world, do not desert the working class from which they sprang, but devote their time and talents to the efforts to raise those yet beneath them a few steps up the ladder. Amongst these, Mr. John Plummer merits honourable mention, for the devotion of his time and talents to benefit and elevate the working classes.

Perhaps some may say I have fixed the standard of Trades Unions too high, and exacted more from them than they can ever be expected to perform. But it is only by continual effort to rise as near as possible to perfect excellence that much improvement is ever made. If the whole of the ideal is not reached, every step towards it is so much absolute gain. Where there is much well-directed endeavour there always will be some success.

A word in conclusion to the masters. We have spoken out plainly as to the extent to which they have too often given their men just reason to complain. Indeed, many of their body have themselves to thank for most of the evils Trades Unions have inflicted on them. It is, however, a pleasure to think that there are many—we trust very many—amongst them of a widely different stamp, who are in every sense the best friends of the men they employ. But even these have stood too much alone—divided as a class, each going his own way. This will not do in these times. The combinations of workmen must be met by counter combinations of masters—met, not in a spirit of hostility, but of friendly intercourse. It is impossible to reap the full advantage of a spirit of conciliation until there are organised bodies on both sides to reason and treat with one another. And let masters never forget that it is futile to expect their workpeople to be contented and reasonable unless they are treated with even something more than perfect fairness. Without some liberality and courtesy towards those whom they employ, masters can never have that influence which often prevents discontented reductions caused by the necessities of bad trade from breaking out into unreasonable dispute and quarrelling. At such times workmen too often sum up and remember all the griefs against their masters that have long rankled in their minds, and are prepared

to put the worst construction upon everything. Moreover, all that has been said about the necessity of good special education, and keeping up the high character of English work and manufactures, applies, as has been before remarked, perhaps even more forcibly to the masters than to their workpeople, if our country is to maintain her leading position in these days of unrestricted competition.

I am well pleased to see by the Journal of Sept. 19 that the iron-workers of Staffordshire have wisely avoided the error I warned them against of asking an advance before the improvement in the trade is fairly established, and follow the prudence of their masters, who have not yet raised their prices, and that they adhere to their policy of seeking to settle all disputes by conciliation and arbitration. These are good signs, and their masters will show sagacity if, without waiting for any pressure, they fairly of their own accord concede to their men any improvement in the conditions of their work that they can afford as soon as the trade will bear it. A few instances of such considerate treatment would go far to give their workpeople such confidence in their fair dealing as would put an end to all possibility of future strikes and quarrels.

Last week's Journal also brings me a friendly notice from Mr. S. Jenkins, for which I thank him. It is some comfort to be encouraged by the hope I may have, to some extent, profited, and not wearied, your readers by this series of letters. I notice his remarks on points of detail, but have all along rather dealt with general principles, eschewing all officious advice as to what each body of masters and men ought to be able to settle better for themselves than any third party can for them, as every man may be presumed to know his own business best. But it will give me much pleasure to answer through your columns any enquiry as to any particular case or matter to the best of my ability for all who attach any importance to my opinion. I should like to see in your pages a summary of the paper Mr. Jenkins read at the Norwich meeting "On the Festing Slate Veins."

Though this letter concludes my weekly series, I may now and then recur to the subject in your columns, remarking upon any matter of interest that may arise from time to time, especially the approaching discussion at the Social Science meeting.

London, Sept. 29.

A MAN OF EXPERIENCE.

COPPER SMELTING NEAR LIVERPOOL.

SIR.—As the *Mining Journal* has a wide circulation it is the best medium for correcting what appears in it not in accordance with the facts of a case, and I, therefore, hesitate not to beg room for the following. In last week's Journal there appears an article, headed "The Copper Trade," and its object, without doubt, is to raise Swansea at the expense of Liverpool, but the writer either knew nothing about Liverpool or wrote to mislead. It so happens that there are no copper works in or near Liverpool, and the report of the Liverpool Corporation having taken up the smoke matter, &c., is all "bosh." At St. Helen's, twelve miles distant, there are six or seven important copper works, and here some actions have been brought against smelters, but chiefly in consequence of a decision in the County Court; but one of the smelters, thinking this decision not what it should have been, resisted a claim, that the point might be tried and settled by the Judges at the Assize. The trial has just come off, and Mr. Justice Hannen ruled quite the reverse of that of the County Court Judge; and this, of course, is in favour of the smelters. So far in rectification; and, in conclusion, I may remark that three or four of the wealthiest smelting firms in the kingdom have their works at St. Helen's; and at the *Liverpool Ticketings* for ore the leading *Swansea firms bid*; so that Liverpool is in no way inferior to, but has many advantages over, Swansea for the importers of copper ore. The Swansea inhabitants, it appears, welcome all smokes and smells and poisoning of the atmosphere; but the Liverpool Corporation is active in checking all such nuisances in the town.

Liverpool, Sept. 29.

A SMELTER.

RECENT GOLD DISCOVERY IN NEW ZEALAND—No. V.

SIR.—My correspondence to you upon this most important event in the Antipodes has no doubt called up many thoughts from enterprising individuals in this country; and one thing certain is, that looking over all the different quarters of the globe, the recent gold discovery in New Zealand must pale every other modern auriferous field. My remarks in my series of four letters to you have been this week fully confirmed by the *London Times* and *Daily News*. The following extract from a private letter, dated Aug. 1, speaks volumes for the Hauraki or Thames Gold Field. The writer says:—"The newspapers will tell you what we have done during the last fortnight, so that I need only add that this claim (Hunt's) turned over 5000 oz. of melted gold as the result of four days' crushing; and, on the whole, the second week's work shows no falling off. The Panama steamer, leaving Auckland on Aug. 8, will take about 10,000 oz. from this claim alone, to be forwarded to the Bank in London, and this the result of 12 days' crushing. Of course, we cannot expect to keep up this amazing yield, but even if it should be reduced to 1500 oz. a week, that will allow of a satisfactory dividend. The price of the Thames gold is low, in consequence of the admixture of silver, so that about 21. 16s. an oz. is all we get at present. The machinery, kiln, furnaces, and shops have cost a round sum of money, but they are all paid for. It is probable we shall be obliged to work only four stampers for want of water to drive more. The steam-engine is of 20-horse power, and takes a great deal of water. We must deepen the well, and if that does not suffice erect a water-race for two miles from a neighbouring creek. Fifty hands are constantly employed at high wages. Hitherto everything has gone on smoothly."

I think this is quite as satisfactory as the most sanguine could wish, and, moreover, more than bears out my dissertation on Hunt's or the great claim, in my letter (No. II.) to the *Mining Journal* of Sept. 12. I have no statistics before me to give any yield approaching that of Hunt's claim in either California or Australia. How many of the wild cat schemes that have been recently brought out here would delight in having their one or two years' operations giving results of the few days' working only of the New Zealand mines. J. E. SMITH, Oct. 2. Her Majesty's Civil Service.

MINING IN THE CALLINGTON AND CALSTOCK DISTRICT.

SIR.—For some weeks past you have kindly furnished us with information as regards the prospects of mines on the south side of the range of hills known as Kig Hill and Hingston, in the parishes of Callington and Calstock; and, as a resident in the district, and intimately acquainted with the mines, especially South Prince of Wales, I feel a pleasure in being able in many respects to confirm the statements kindly offered in their favour, and I may assure you, from the quantities of mineral sold monthly to the Cornubia Chemical Company (whose works are established in their sett), and from their financial position, the South Prince of Wales only requires to be known to be appreciated by the investing public. But while I believe the south side of this range of hills to be well worthy of the attention of all connected with mining, the north side is even more so, because the mineral to pay large dividends is already laid open in some instances, and only requires the erection of the necessary machinery to make them properties second to none in the county. The property I more particularly refer to is that which has been lately commenced under the title of the East Cornwall Consolidated Mines, and which comprise the Holmush and Kelly Bray Mines. I believe everyone who knows anything of Holmush is prepared to admit that from the 80 fathom level there is laid open immense quantities of copper pyrites, valuable when these levels were driven, but a valuable mineral now, when the little labour required to dress it is considered, and the immense demand there is for it. I am informed that the Cornubia Chemical Company has entered into a contract to take the whole of the mounds raised at these mines at a price per unit of arsenic that will leave a large margin for profit; and after making every reasonable deduction I believe 750l. worth of mineral per month can be raised, at a cost of 500l. Then, in the Kelly Bray part of the sett they are now driving upon a side lode discovered in the adit level, worth, according to the valuation of the Duchy agent, 25l. per fathom, and, as they approach the great cross-course, materially increasing in value, with every appearance of making an immense deposit of ore; and this lode, so far as is known, is all in whole ground. With your permission, I will continue my remarks on this district in next week's Journal. G. P.

CHONTALES GOLD AND SILVER MINING COMPANY.

SIR.—However much more promising the affairs of this company may appear now than latterly, it would, I do not doubt, be satisfactory to others than myself to understand how the directors account for it that we never hear anything more of those very rich ores that they told us of in their original prospectus. Although they therein told us of ores—that is to say, of samples—yielding 100 to 200 oz. of gold to the ton, they now seem to think it a great matter if we get half an ounce to the ton.

Can you, Sir, or any one of your numerous readers, inform us whether these enormous rich ores are being diligently sought for, or whether the directors have given up all hope of being gladdened by their appearance? It will be remembered that, according to the original prospectus, Capt. Francis sent home 45 samples of ores, yielding on assay, some of them, as high as between 100 and 200 oz. to the ton, and on an average 20½ oz. Now, of course, the directors believed these samples to be bona fide representatives of bulk, or they could not have put them before the public, in order to induce applications for shares. Nor is it conceivable that Capt. Francis should have just scrambled up, haphazard, handfuls of prodigiously rich ore in several different parts of the mines, leaving behind, immediately surrounding, nothing but rubbish, comparatively speaking. The directors, then, must either believe now that they were deceived by Capt. Francis in the matter of these samples, or they must believe that the said prodigiously rich ores are on the mines waiting to be dug up; in which latter case it is to be hoped that they will no longer waste their energies and resources upon

every comparatively *trumpery* ore that may present itself, but set to work to discover the richest of the surface. Why, Sir, one of the lodes represented by one of Capt. Francis's samples might repay us all the time we have spent. I hope that some one connected, or, failing that, one of your numerous readers, will enlighten us upon the points touched upon. London, Sept. 30. AN ORIGINAL SHAREHOLDER.

PRACTICAL ASSAYING.

There is, probably, no branch of science upon which the pecuniary success attending the development of our mineral wealth is more dependent than that which includes practical assaying; yet its study has ever been much neglected by miners generally, and the number of works published upon the subject have, consequently perhaps, been by no means numerous. Until the issue of the "Manual of Practical Assaying," by the late Mr. JOHN MITCHELL, the student had only the technical literature of France and Germany to guide him, and as he was fortunate indeed if he possessed even an elementary knowledge of the languages in which the works were written, it will readily be understood that in by far too many instances he was entirely powerless to profit by the researches of others, and had to content himself with the application of his own dearly-bought experience. For some years past, however, Mr. Mitchell's work has enjoyed an enviable position as a text-book for assayers—the second edition, which, it must be admitted, had become somewhat antiquated, having recently been exhausted. The volumetric process of analysis was in its infancy when Mr. Mitchell wrote, and even what was known of it was regarded with suspicion, or at least not fully appreciated, by assayers, and hence we find comparatively slight reference made by him to that which is now generally regarded as the branch of assaying essentially valuable in connection with industrial operations. The third edition of the work has now been issued, and certainly appears to supply all the information that is at all likely to be required in practice.

Volumetry and colorimetry are treated of exhaustively, and the subject of blow-pipe assays has also received a larger amount of attention; and it will be gratifying to a large number of those for whom the work is intended to learn that the old equivalents have been retained, because, as Mr. Crookes very truly remarks, they are more generally understood by students of science who do not make chemistry their chief study. In the new work, the latest Continental improvements mentioned in Prof. Keri's "Probirkunst" have been incorporated, as well as the more important descriptions of processes contained in Mr. Sutton's admirable work on Volumetric Analysis. Except that the general arrangement has been retained, the present edition might almost be regarded as a new work—much of the original matter having been entirely re-written, and the size of the book being nearly doubled. To many the arrangement which Mr. Mitchell adopted is well known, yet it may be well to mention that it is a thoroughly practical one—just enough information with regard to chemical nomenclature and the theory of salts, the laws of combination, chemical symbols, &c., being given to enable the student thoroughly to comprehend the instruction subsequently given. With regard to actual assaying, the description commences with the preparation of the sample, whence the reader is gradually and systematically led through all the subsequent operations—such as chlorination, washing, fusing, fuming, weighing, calcining, roasting, reducing, dissolving, and subliming. A chapter is then devoted to the production and application of heat, and there is an admirable chapter on reducing, oxydising, desulphurising, and sulphurising agents, the study of which would, no doubt, afford material aid to practical men who may be desirous of improving or perfecting the processes they may be using in their ordinary course of business. The explanations given in the book are clear and concise, and the applications of various reagents used in the course of qualitative and quantitative analysis leave little to be desired; and the same may be said with regard to the succeeding chapter on the blow-pipe.

But when we come to the chapter on volumetric analysis, there certainly seems a slight omission which, although it could have been easily supplied by a scientific chemist, will be severely felt by practical men who take the book, as they certainly might, for ponderal analysis as their almost only guide. In volumetric analysis (unless it be practised by those who are sufficiently well acquainted with the higher branches of chemistry to be able to judge of the applicability or inapplicability of any given volumetric process to the particular ore or other substance under treatment) it is essential that the manipulator should be informed of the means of separating the several metals belonging to a single group before commencing the volumetric estimation—or failing that, it should have been at least stated what particular kind of substances the several processes are applicable to; yet upon neither of these points is the information of a very copious character. There are many processes given in Mr. Sutton's book, and in the present volume, which give accurate results only in the absence of certain antagonistic elements; yet the mode of removing these elements is not fully described. Of course, it may be said that the lucid descriptions of the nature and action of reagents given in other parts of the book will give the student the power to exercise his judgment in the matter; but it is not every student who can help himself to that extent. He may know that if he precipitates with sulphuretted hydrogen from an acid solution, separates the precipitate, digests it in sulphuric acid, and separates the residue, his solution will only contain salts of tin, antimony, arsenic, platinum, gold, and of some other metals of no especial industrial interest; but he will need assistance to enable him to separate the several sulphides from each other—say, antimony from tin, or arsenic from antimony. It is the want of this information in a sufficiently tangible form—for, no doubt, it may, at least from the work now under consideration, be obtained indirectly by careful reading—that has caused practical men to complain of their failure to obtain reliable results from working with Mr. Sutton's book, and it is to be feared that from this, perhaps trifling defect, the present volume is not altogether free; it is one, however, which can be compensated by a little extra reading, so that too much importance should not be attached to it.

Taking the third edition of "Mitchell's Manual of Assaying" as a whole, it is unquestionably calculated to add to Mr. Crookes' already high reputation as an analytical chemist; his object has evidently been to supply a work of the utmost utility, rather than to display his vast scientific research, or to propagate any favourite or doubtful theory of his own, and this object he has fully attained. His book is one which may safely be taken as a guide by purchasers of ores, by assayers, and by a large number engaged in the industry of chemical manufacture; it is the well-known standard work, modified and improved to meet present requirements.

* "A Manual of Practical Assaying." By JOHN MITCHELL. Third edition. Edited by WILLIAM CROOKES, F.R.S. London: Longmans, Green, and Co.

SOCIETY OF ENGINEERS.—The annual volume of Transactions—that for 1867—has just been published by Messrs. Spon and Co., of Charing Cross, and contains an unusually interesting collection of papers, comprising—"Experimental Researches into the Nature and Action of Safety-Valves for Steam-Boilers," by Thos. Baldwin; on Certain Methods of Applying Screw-Piles in the Construction of a Wrought-Iron Girder Bridge at Verona, by John G. Horner; on Water, and its Effects on Steam-Boilers, by H. K. Babner; on Pumping-Engines for Town Water Supply, by Henry Davey; on Water-Tube Boilers, by Vaughan Pendred; on the Quality of Iron as now used, by Ewing Matheson; on Mechanical Saws, by S. W. Worssam, Jun.; on the Connection between the Shape of Heavy Guns, and their Durability, by Arthur Rigg, Jun.; and on the Most Recent Improvements in the Injector, by James Gresham. The volume also contains an account of the Society's visit to the Paris Exhibition, and a very large number of admirably executed lithographs to elucidate the several papers. Amongst the rights and privileges of a corporate body the Society has the right of registration under the "Literary and Scientific Institutions Act," 1854; and, as the council now consists of gentlemen of considerable practical experience in connection with engineering works, it may be hoped that the well-founded prosperity of the institution will continue to increase. Even as a work of reference alone the Transactions are well worthy of a place in an engineer's library.

GOLD IN NEW ZEALAND—EXTRAORDINARY RESULTS.—The New Zealand papers contain an account of the results of working by steam machinery on one quartz claim, known as the "Pioneer claim," at the Auckland gold fields. The yield of 1500 oz. was obtained from 16 hours' crushing with four heads of stamps, and in four days the out-turn was 5207 oz. Annexed are the particulars:—"The machinery in connection with the Pioneer claim on the Auckland gold fields was started yesterday, and the golden harvest of its fortunate proprietors (Messrs. Hunt and party) may be said to have fairly set in. The whole battery was started about noon yesterday, with the poorest stuff on the battery, and after filling up the boxes, and giving the richer quartz and the battery a better test. After several hours' work at this, eight heads of stamps were lifted, and the single set of four heads filled with specimens mixed with inferior stuff. When the battery had been at work two hours the stamper box had become overcharged with amalgam, and the second battery was started to relieve it. Two hours afterwards the person feeding at the hopper at the back of the machine found that he could not get the quartz into the stamper box, and called to the engineer to stop the machinery, under the impression that something was going wrong. On examination it was found that the opening where the quartz is put in was thoroughly stopped up with amalgam, and nearly 100 lb. weight was taken out of the stamper box and carried to the retort in buckets. While this work was going on the third battery was set in motion, and so the work of crushing by means of four heads at a time was continued until 8 o'clock this morning, when the extraordinary yield of 1500 oz. of returned gold was obtained as the result of 16 hours' crushing. Of course, the one from which this yield was obtained was specimens mixed with inferior material, the latter being put in to enable the quicksilver to perform its work upon the mass of gold turned out of the rich stone. It is expected that the first week's crushing, with only four heads of stamps, will turn out 5000 oz. of gold."

The *Thames Advertiser* of July 28 says:—"The four heads of stamps have continued their work with unparalleled success since steam was got up on Monday last. This morning the Union Bank shipped per *Tananga*, an account of Messrs. Hunt and party, 5207 oz. of melted gold, the result of the first four days' work. Besides the above there were 3000 oz. of gold returned and ready for melting, and a considerable quantity of amalgam, up to noon to-day. It is gratifying to find that Mr. Hunt's estimate of 10,000 oz. for the first crushing will turn out under the mark instead of over it, and that he will consequently gain the heavy wager dependent on such a yield. The gold was made up into 16 ingots. Great praise is due to Mr. Muir, of the Union Bank, for the creditable manner in which he accomplished the work of smelting this return."

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending Sept. 27 amounted to 10,543l. 15s. 7d.

HOLLOWAY'S OINTMENT AND PILLS—CONSTANT SUCCESS.—No diseases are more trying to the temper, or more exhausting to the constitution, than the pains in the muscles and joints, caused by exposure to wet or cold. Wherever the seat of suffering, it will only be necessary to foment the affected part with warm water, dry thoroughly, and immediately rub in Holloway's inestimable ointment to obtain ease. Gout, rheumatism, neuralgia, and tic-doloureux are soon relieved, and ultimately cured, by the use of this unequalled unguent, aided by Holloway's purifying and aperient pills. Whenever persons subject to gout or rheumatic gout feel unusually nervous, weak, exhausted, or out of sorts, they should instantly resort to this treatment, which will avert the threatened attack.

Government Inspection of Coal Mines.

THE INSPECTORS' REPORTS.

The reports of the several Inspectors for 1867, as well for coal mines as for the mines of ironstone of the coal measures, have just been printed, and although the actual number of deaths is smaller by 294 than in 1866, the apparent improvement seems to result merely from the great event of the year—the Ferndale calamity—not having been equal to the Oaks and the Talke-o'-th'-Hill, and not from any general improvement in connection with colliery working. As observed in commenting upon a former report, it appears that taking the average for a number of years (and excluding the one or two great accidents which occur each year) the results are almost uniform. The number of separate accidents is nearly equal, and every five accidents cause six deaths. We subjoin our usual tabulated summary, which will permit of the fatality of the several classes of accidents being compared:

COAL MINES—1866.

	Separate Accidents.					Deaths Resulting.				
	Explosions of Fire-damp.	Falls of Roof and Coal.	Slips and Slides of Working.	In shafts.	Miscellaneous, underground and at surface.	Explosions of Fire-damp.	Falls of Roof and Coal.	Slips and Slides of Working.	In shafts.	Miscellaneous, underground and at surface.
North Durham, Northumberland, Cumberland district	3	30	9	49	91	4	33	9	53	99
Southern division of Durham	2	23	11	48	84	28	23	12	52	115
North and East Lancashire	6	25	9	18	58	13	25	9	22	69
West Lancashire and Nth. Wales	11	34	16	44	105	53	37	16	41	150
Yorkshire district	4	29	17	11	61	364	29	20	12	425
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire	6	25	5	19	55	7	26	5	20	58
North Staffordshire, Cheshire, and Shropshire	9	11	10	17	47	142	11	10	18	181
South Staffordshire & Worcester	11	46	24	15	96	14	52	25	18	109
Sou. West. Div. (parts of Monmouth, Gloucester, Glamorgan, Brecon, and Devon)	5	38	18	14	75	6	38	20	17	81
South Wales district	8	48	15	42	113	13	49	15	43	120
Eastern district of Scotland	4	10	6	9	29	5	11	7	9	32
Western district of Scotland	2	26	13	2	43	2	27	14	2	45
Total	71	345	153	288	857	651	361	162	310	1484

COAL MINES—1867.

	Explosions of Fire-damp.	Falls of Roof and Coal.	Slips and Slides of Working.	In shafts.	Miscellaneous, underground and at surface.	Explosions of Fire-damp.	Falls of Roof and Coal.	Slips and Slides of Working.	In shafts.	Miscellaneous, underground and at surface.
North Durham, Northumberland, Cumberland districts	—	31	8	32	71	—	31	18	32	81
Southern division of Durham	1	28	2	43	74	1	29	2	45	77
North and East Lancashire	8	30	10	23	71	18	30	12	24	84
West Lancashire & North Wales	8	53	16	42	118	23	53	16	42	134
Yorkshire district	1	40	13	30	84	1	41	18	30	90
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire	2	25	11	21	59	4	25	11	24	64
North Staffordshire, Cheshire, and Shropshire	11	25	15	10	61	17	27	20	16	74
South Staffordshire & Worcester	7	58	14	16	95	18	60	16	17	111
Sou. West. Div. (parts of Monmouth, Gloucester, Glamorgan, Brecon, and Devon)	6	38	10	15	69	6	39	10	16	71
South Wales district	4	65	14	36	119	185	67	15	42	309
Eastern district of Scotland	6	23	14	8	51	11	23	14	12	60
Western district of Scotland	2	24	6	3	35	2	24	6	3	35
Total	56	440	132	279	907	286	449	158	297	1190

IRONSTONE MINES—1866.

	Explosions of Fire-damp.	Falls of Roof and Coal.	Slips and Slides of Working.	In shafts.	Miscellaneous, underground and at surface.	Explosions of Fire-damp.	Falls of Roof and Coal.	Slips and Slides of Working.	In shafts.	Miscellaneous, underground and at surface.
West Lancashire & North Wales	—	1	—	—	1	—	1	—	—	1
Derby, Notts., Leic., & Warwick	—	3	1	2	6	—	3	1	2	6
North Staff., Cheshire, & Shrop.	—	1	5	2	8	—	1	5	2	8
South Staffordshire & Worcester	—	1	2	2	5	—	1	2	2	5
Southern Division	—	12	1	1	14	—	12	1	1	14
South Wales district	—	5	2	3	10	—	4	2	3	9
Eastern district of Scotland	—	1	2	2	5	—	1	2	2	5
Western district of Scotland	—	1	1	—	2	—	1	1	—	2
Total	—	3	12	18	33	—	4	11	18	33

IRONSTONE MINES—1867.

	Explosions of Fire-damp.	Falls of Roof and Coal.	Slips and Slides of Working.	In shafts.	Miscellaneous, underground and at surface.	Explosions of Fire-damp.	Falls of Roof and Coal.	Slips and Slides of Working.	In shafts.	Miscellaneous, underground and at surface.
South Durham	—	1	—	—	1	—	1	—	—	1
Yorkshire district	—	—	—	—	—	—	—	—	—	—
Derby, Notts., Leic., & Warwick	—	—	3	2	5	—	—	3	2	5
North Staff., Cheshire, & Shrop.	—	1	13	6	22	—	1	14	6	23
South Staffordshire & Worcester	—	7	1	—	8	—	7	1	—	8
Southern Division	—	1	9	2	14	—	1	9	2	14
South Wales district	—	5	6	—	11	—	5	6	—	11
Eastern district of Scotland	—	1	1	2	4	—	1	1	2	4
Western district of Scotland	—	1	4	1	6	—	1	4	1	6
Total	—	4	40	15	59	—	4	41	16	60

With regard to the number of male coal miners employed in and about the coal mines of Great Britain, the number of fatal accidents and lives lost, the quantity of coal raised, and the proportion of accidents and lives lost to the number of persons employed, and to the tons of coal raised in the year, the figures of 1867 are, upon the whole, not less favourable than those for the preceding year; yet considering that the Ferndale was the only heavy calamity during the year reported upon, the figures leave little room for congratulation. The subjoined tables will enable a comparison of the several particulars to be readily made:—

1866.

Names of districts.	As computed by each Inspector for his own district.		Per separate fatal accident.	No. employed per separate fatal accident.	Tons of coal raised per separate fatal accident.	Tons of coal raised per life lost.	Number of collieries.
	Males employed.	Tons coal raised.					
Northumberland, Cumberland, & N. Durham	25,647	10,763,800	281	259	118,283	108,725	160
South Durham	35,720	14,930,000	425	310	177,738	129,826	155
North & East Lancashire	25,440	6,774,000	438	368	116,793	98,173	265
West Lancashire and North Wales	30,000	8,000,000	285	200	79,623	55,666	180
Yorkshire	35,500	9,450,000	582	83	154,918	22,235	434
Derby, Nottingham, Leicester, & Warwick	27,100	7,600,000	494	467	138,182	131,034	196
Nth. Stafford, Cheshire, and Shropshire	20,210	5,800,000	430	112	117,021	30,387	220
S. Stafford & Worcester	27,000	10,300,000	281	248	107,292	94,495	244
Monmouth, Gloucester, and Somerset, and Devon	26,000	6,000,000	346	321	80,000	74,074	528
South Wales	29,200	9,876,443	258	243	82,977	78,137	358
Totals—England & Wales	279,417	88,694,243	—	—	—	—	—
East Scotland	21,290	6,100,000	731	662	210,348	190,625	254
West Scotland	20,046	6,394,638	466	445	138,010	131,890	218
Totals, Scotland	41,236	12,494,638	—	—	—	—	—
Totals & averages, Eng. & Wales, Scotland	320,653	100,728,881	374	216	117,537	67,877	9192

1867.

	Males employed.	Tons coal raised.	Per separate fatal accident.	No. employed per separate fatal accident.	Tons of coal raised per separate fatal accident.	Tons of coal raised per life lost.	Number of collieries.
Northumberland, Cumberland, & Nth. Durham	26,321	11,005,500	270	225	115,007	135,870	167
South Durham	37,000	15,442,000	500	481	208,676	200,545	169
North & East Lancashire	26,820	6,844,000	277	219	96,394	81,476	281
West Lancashire and North Wales	30,000	8,550,000	254	224	70,762	62,313	160
Yorkshire	37,000	9,850,000	440	411	117,261	109,444	404
Derby, Nottingham, Leicester, & Warwick	27,000	7,000,000	457	422	128,814	118,750	252
Nth. Stafford, Cheshire, and Shropshire	21,000	6,000,000	344	244	98,360	81,081	222
S. Stafford & Worcester	27,100	10,268,000	285	266	108,084	92,504	540
Monmouth, Gloucester, Somerset, & Devon	26,000	6,500,000	377	35	94,203	91,549	229
South Wales	29,300	9,092,300	246	246	76,406	29,425	328
Totals—England & Wales	283,041	90,951,800	—	—	—	—	—
East Scotland	29,000	7,897,368	568	483	154,851	131,622	254
West Scotland	21,075	6,228,575	602	602	177,959	177,959	211
Totals, Scotland	50,075	14,125,943	—	—	—	—	—
Totals & averages, Eng. & Wales, Scotland	333,116	105,077,743	367	280	115,852	88,300	3195

The above tables really embrace all the general statistics contained in the reports, and a large amount of information as to the precise

circumstances under which the several accidents happened. The reports also supply many valuable suggestions and particulars relating to colliery working generally, extracts from which we subjoin.

LOSS OF LIFE IN ENGLISH AND BELGIAN COLLIERIES COMPARED.

In his report for the South Durham district, Mr. ATKINSON gives an interesting comparison of the casualties attending coal mining in England and in Belgium, which shows that whilst in England we raise 85,681 tons of coal for each life lost in Belgium, which has so frequently been pointed to by English writers as the model of excellence, they sacrifice one life to raise only 42,330 tons of coal, or in other words that coal mining in Belgium is twice as dangerous as in England. In the South Durham district the deaths, for a given quantity of coal raised, are only about one-fourth as numerous as in Belgium. The deaths from explosions of fire-damp in the mines of Great Britain are shown to have been only 80 per cent. of those in the mines of Belgium, and in this district only 13 per cent. of those in Belgium, for a given quantity of coal raised. The deaths from falls of coal and roof in the coal mines of Great Britain are shown to have been less than 63 per cent. of those in the coal mines of Belgium, and in the South Durham district little more than 31 per cent. of those in Belgium, for equal quantities of coal raised. The deaths from shaft accidents in Great Britain only form about 28 per cent., while those of the South Durham district are less than 12 per cent. of the deaths from the same class of accidents in Belgium, for equal quantities of coal raised. The deaths from miscellaneous accidents in and about the collieries of Great Britain are shown to have been less than 44 per cent., and those of the South Durham district only 47½ per cent., of those in Belgium, for equal quantities of coal raised.

These results are all favourable to the mines of Great Britain, when compared with those of Belgium, and that for the most part in a very high degree, and, in general, more especially so as regards the South Durham district. But it may be remarked that in the Belgian collieries there are more persons employed, in proportion to the quantity of coal raised, than are employed in Great Britain, owing to the average thickness of the seams of coal being much less in Belgium than in Great Britain, in proportion to the quantity of coal raised. There are, probably, upon an average, about two and a half times as many persons employed in and about the Belgian collieries, for a given quantity of coal raised in a given time, as are employed in and about those of Great Britain, to raise the same quantity of coal in the same time, so that, if a comparison were made, based entirely upon the relative numbers of persons employed, it would be found that there are fewer deaths in proportion to the Belgian collieries than at those of Great Britain, more especially from explosions of fire-damp, and considerably fewer from falls of coal and stone, and miscellaneous accidents. And our British coal mines, taken as a whole, would only show a less degree of fatality to life than those of Belgium in the single class of shaft accidents, by this mode of comparison. But if the collieries of Belgium were, on this mode, compared with those of the South Durham district alone, it would be found to be, on the whole, very much in favour of the South Durham district, and most especially so as regards deaths from explosions of fire-damp, and shaft accidents; considerably so as to those resulting from falls of coal and stone, and a greater amount of fatality would only appear as prevailing in the South Durham district from the single class of accidents termed miscellaneous.

WORKING OF THE MINES INSPECTION ACT.—The Inspection Act, in Mr. EVANS'S district, is working well; it has been the means, by introducing better machinery, increased ventilation, greater supervision, and fixing responsibility, of saving life. He is still of opinion that it can be carried too far, so as to interfere with private enterprise, and also relieve the owner and agent of that responsibility which he is entitled to. He is, however, of opinion that the system is working well, and that the Mines Inspector's district in obtaining compliance with the Double Shaft Act, although instances are so frequently occurring which show the wisdom of that enactment. The most common attempts at evasion are in small fields, when a pit works 30 or 40 acres of coal; the pits are planted from 300 to 400 yards apart, and when they reach the coal and are opened up, ordinary workings are carried on in all directions, as well as the means of communication, and in some instances the pits would have been communicated and the system of obliging children of a certain age, whose education has been neglected, to attend school for a given time weekly, after they have commenced to work, is, in Mr. ALEXANDER'S opinion, not applicable to all trades; at best it is but a makeshift; the results are doubtful, and the regulation in mines relating to education receives no hearty support from those whom it was designed to benefit. The law recognises the obligation of parents to support their children, unless they are paupers; if that just and common sense measure could be extended to children employed in the mines, such as limiting the age at which children should be employed, would be unnecessary. In some to him the most direct and practical way of carrying out a broad system of education, and any measure short of it will be unpopular, and expensive to enforce, and even when most successful can only check the evil which it attempts to cure.

INCREASE OF GOVERNMENT INSPECTION.—It would, in the opinion of Mr. PETER HIGSON, be hoping as it were against hope that the inspection of mines could ever prevent the occurrence of many of those accidents hereinafter described, even though the number of Inspectors were to be many times multiplied; but if it be deemed necessary to increase inspection, it may be effectually and economically carried out without increasing the present staff of Chief Inspectors, by appointing a second grade, consisting of young men of education and good character, to act as their assistants, and at a smaller salary; they would, under the guidance and supervision of the present Inspectors, render most valuable and important services. In no case should the owners of coal mines be relieved in any degree of their responsibility, and workpeople should be continually instructed in the best way of taking care of themselves.

Mr. BROUGH remarks that a strong desire has prevailed for some time past amongst the colliers and miners for more inspection; if this is granted, and the number of Inspectors increased, he hopes that additional responsibility will not by any means be incurred, for that most necessary always rests with the proprietors and their agents, and he has no doubt that the measures which will be redound to their own interests will be the effect of more inspection by themselves. If the Government makes an increase, it is not at all unfair to expect that the owners should do the same.

VOLUNTARY INSPECTION OF MINES.—Mr. DAGLISH, the mining engineer and general manager of Earl Vane's collieries, has organised a system of voluntary inspection at many of the collieries under his charge, by which some of the workmen are made to examine all parts of the mines at stated intervals, to ascertain, as far as they can, the state of the air-ways, and to consider the general state of the mines with respect to safety, and to report in writing to him the result of their inspection and investigation; and Mr. ATKINSON has reason to think that it answers a good purpose, and gives general satisfaction to the workpeople employed in the mines; and he anticipates receiving, as Inspector of Mines, a complaint from the workmen if they found anything dangerous and requiring his attention, unless the danger was such as to admit of being quickly remedied, and the agents arranged to have it rectified at once. He expresses the wish that the system could be generally adopted at the mines in the district, as he thinks it is well calculated to prevent any of the subordinate agents neglecting to keep matters safe in their respective departments, and is, in other respects, calculated to promote the general safety of the mines. Its general adoption would, perhaps, have the effect of satisfying many of the workmen, in the absence of its adoption, think it desirable to appoint an additional number of Government Inspectors of Mines.

COMPLAINTS FROM WORKMEN.—Of the very few complaints from workmen as to the condition of, or practices in, the mines of the district which have reached Mr. ATKINSON during the past year, the majority have been made without any proper cause or foundation, mostly arising out of some ill feeling between the person complaining and the agents of the collieries. In other cases, however, there was reason for the complaints, the causes for which were at once agreed to be removed, in one instance at very great cost.

Complaints from workmen respecting the condition of some of the mines have been received by Mr. EVANS. In each case a careful investigation and inspection from overlooking during last year, he has thought it necessary to make have had attention. He received information from Newbold that boys under age worked in the mines, and at once communicated with the several colliery owners, and they assure him that, after careful enquiry, they are satisfied there is no truth in the charge brought against them.

Mr. MOORE remarks that an important means by which a manager can attain a more perfect knowledge of the movements in a colliery, and can frequently provide against danger, is by attending to the complaints and warnings from any of the workmen in a spirit of kindness and consideration. It has often been said by the workmen that the complaints from them are looked upon with suspicion by the managers, and that workmen do not make them, from dread of displeasure or dismissal. He believes this seldom, if ever, occurs—at all events, if ever it does occur, the manager who does it loses valuable opportunities of becoming acquainted with the practical working of the mine, and of the various operations going on. When any workman in a colliery, whatever be his position, finds that his opinion is listened to with attention, and its accuracy tested and appreciated, he gives it willingly, and soon becomes careful that it is accurate before he ventures to make it.

INCREASED USE OF MACHINERY.—Competition, high wages, and the scarcity of workmen during the past two or three years are, Mr. MOORE observes, gradually leading to the application of improved machinery and appliances to economise manual labour in collieries. This is most observable in surface arrangements; winding-engines with double cylinders and drums of large diameter on the crank shaft, instead of intermediate shafts and gearing, are now extensively used. They are a great improvement, as thereby greater quantities of coal can be raised daily out of one pit without a corresponding increase of fixed charges. It is worthy of remark that there has not been a single accident from overwinding during last year, not has there to his knowledge been a breakage of ropes. The greasing arrangements and wagons will stand comparison with any district. The arrangements underground, though advancing, have not made such rapid progress. The ventilation is much improved during the last 10 years; in some cases, however, too little attention is paid to the special rules as to the ventilation, for it will be observed that the explosions during the past years have more frequently arisen from the non-observance of the special rules by the overman and firemen (two of whom are sufferers) than from a deficiency of the general ventilation. Haulage by engine power on underground inclines is more frequently adopted, and many of the applications are very good. Horses are also generally used for underground haulage, instead of men and boys.

NECESSITY OF DISCIPLINE IN COLLIERIES.—The all-important element which should prevail amongst collected bodies of men, whether military or civil, is, as Mr. BROUGH observes, discipline. Nothing else can aid so much in promoting obedience to rules and regulations, but it must become inherent in those who have to direct operations as well as amongst the workmen themselves. Exact hours, strict attention to the special business each person has to perform, no intermeddling with matters which do not appertain to their duty, though—nevertheless, a clear understanding that on the appearance of danger, by whomsoever witnessed, it is immediately reported to the nearest employee of

the mine. To arrive at this increased state of discipline, perhaps more persons will have to be dedicated to safety purposes than are generally at present met with; he believes that the oftener a working place is visited during the turn or shift the more will safety and regularity of operation be promoted. This addition to the staff would most likely repay itself, because there is scarcely a casualty that takes place but what is attended with extra cost to the owner, therefore a diminution of accident will be a lessening of outlay.

THE EVILS OF THE BUTTY SYSTEM.—Referring to the evils apparently inseparable from the butty system, Mr. BAKER mentions that in his district, as is well known, the butty or chartermaster system of working the mines prevails. The butty or chartermaster, who is simply a contractor, engages with the colliery proprietor to get the coal at a fixed price per ton, taking at the same time exclusive possession of the pit, subject, nevertheless, to the control of the manager or ground bailiff, and also the special rules, very few of which, however, as at present existing, apply to him or the deputy whom he may appoint. These men are, as a rule, selected from the ranks of the working colliers, and are, generally speaking, no better educated than their fellows, and it is to be regretted that in many instances they are unable to read the colliery rules. To this class of individuals the daily superintendence of the underground operations is for the most part intrusted, excepting and during the manager's visits, which are in many instances too few and too far between, as it is stated that it is no uncommon occurrence for weeks, and in some cases months, to elapse without any inspection of the mines being made by the manager or ground bailiff, who, by the way, appears to be better known now-a-days by the terms mine agent, mining engineer, or consulting agent, the last of which was some few months since ingeniously invented, and put forward to avoid the consequences of a prosecution for a violation of the second general rule of the Mines Inspection Act. This attempt, however, very properly and signally failed. Without wishing in the least degree to speak disparagingly of the colliery managers or the chartermasters—for it is well known that the former have in some cases many pits to superintend—it is clear that no system of mining can be efficiently conducted where such long intervals of absence on the part of the manager are permitted, for it must be fraught more or less with disaster and disappointment; and last, but not least, be detrimental in every sense of the word to the best interests both of the owner and the persons employed underground. There are, nevertheless, some butty colliers whose pits are worked as safely and with as much credit to themselves as are those carried on under any other mode of working. The existence of the butty system as a whole has, however, offered, and it is to be feared always will offer, insurmountable obstacles to improvement. Moreover, and what is, perhaps, worse than all, several indications point to an apparently growing desire on the part of some of the colliery owners and the agents to remove the responsibility which the provisions of the law impose conjointly upon them, and to cast it upon the butties or contractors and working men, which I may venture to state has never been attempted or contemplated in any other part of Great Britain, for it is, indeed, too absurd to be thought of, as it would at once destroy that confidence in the responsible management on which the colliers must daily rely for safety, and it would also deprive them of the most important benefits to which the Act of Parliament entitles them. It should, however, be distinctly understood that these remarks do not so much apply to the persons involved in this question as to the chartermaster system itself. There can be no doubt that if it were abolished a great saving of some of the most valuable lives in the world would be effected. There

THE NUMBER OF THIS SERIES MAY BE

WATSON BROTHERS' MINING CIRCULAR

WATSON BROTHERS,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSERS. WATSON BROTHERS return their most sincere thanks for the great patronage bestowed and confidence reposed in their firm for 25 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, and the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in this column. In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1839), "Cornish Notes" (second series, 1840), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services to all connected with mining or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

WEST PRINCE OF WALES.—"R." (Regent-street).—Two shafts have been sunk at this mine on two fine looking lodes to a depth of 36 fms. from the surface, and the south shaft will be continued at the rate, we suppose, of about 2 fms. a month. The adit level was driven 40 fathoms in the south lode, which yielded fine stones of ore nearly all the distance, and in the bottom of the shaft there is now a fine looking lode as can be seen; and the agent thinks we are on the top of a fine course of ore. At the Prince of Wales we first found ore 30 fms. deep, and our first rich course of ore was at the 45; so it will be seen we are quite approaching the depth at West Prince of Wales, and we have every reason to expect as good a mine. In addition to driving the adit, &c., and sinking two shafts, a steam-engine, with all the other machinery, has been erected on an extensive mine, has been erected and paid for out of the working capital (3000) which remained after paying for the purchase of the mine, &c., eighteen months ago. No call has ever been made, though a small one may soon be required. The shares are well held, many people holding over 1000 each, and there have not been of late many transactions in them. We remind our readers, however, that when Prince of Wales shares were only 2s. or 4s. a share we strongly recommended them week after week, and great numbers who bought them in consequence sold them afterwards at 3s. Prince of Wales then stood almost alone in the district, but it is now a strong; and in recommending West Prince of Wales to those who can get shares, we have the experience of the same lodes and the results of Prince of Wales to guide us.

SATURDAY.—Market quiet. Prince of Wales, 39s. to 41s.; Chiverton, 2s. to 3s.; Marke Valley, 7s. to 7½; East Grenville, 2s. to 2½; Chontales, 2s. to 2½; West Prince of Wales, 6s. to 8s.; Wheal Grenville, 20s. to 25s.; Don Pedro, 3s. to 3½; Yudanamutana, 2s. to 3s.

MONDAY.—Market moderately active. Prince of Wales shares in demand; Wheal Chiverton shares reduced to 2½; Prince of Wales, 39s. to 41s.; Chiverton Moor, 6s. to 6½; West Prince of Wales, 7s. to 9s.; East Grenville, 2s. to 2½; Marke Valley, 7s. to 7½; West Chiverton, 6s. to 6½; Basset, 67½ to 70; Wheal Chiverton, 2s. to 2½; Chontales, 2s. to 2½; Don Pedro, 3s. to 3½; Yudanamutana, 2s. to 3s.

TUESDAY.—Good demand for Prince of Wales, Chiverton, Basset, Marke Valley, Seton, Great Laxey, and Don Pedro shares. Prince of Wales, 40s. to 42s. 6d.; Chiverton, 2s. to 2½; Basset, 67½ to 72½; Marke Valley, 7s. to 7½; Great Laxey, 17½ to 18; Seton, 47½ to 52½; Don Pedro, 3s. to 3½; Chontales, 2s. to 2½; Yudanamutana, 2s. to 3s.; Great Laxey, 11 to 12.

WEDNESDAY.—Active demand for Prince of Wales shares, at 40s. to 42s. 6d.; Chiverton, 2s. to 2½; Marke Valley, 7s. to 7½; Chiverton Moor, 6s. to 6½; Basset, 67½ to 72½; Great Laxey, 17½ to 18; East Grenville, 2s. to 2½; Wheal Grenville, 20s. to 25s.; Don Pedro, 3s. to 3½; Yudanamutana, 2s. to 3s.

THURSDAY.—The market is again active for Prince of Wales, at an advance, West Chiverton, West Seton, Marke Valley, Great Laxey, and Don Pedro. Prince of Wales, 41s. 6d. to 43s.; West Chiverton, 60½ to 61½; West Seton, 152½ to 157½; Marke Valley, 7s. to 7½; Great Laxey, 17½ to 18; Great Laxey, 11 to 12; Wheal Seton, 51 to 51½; Chontales, 2s. to 2½; Don Pedro, 3s. to 3½; and Yudanamutana, 2s. to 3s.

FRIDAY.—The market is again active, with a good demand for Prince of Wales, at 41s. to 43s.; West Chiverton, 60½ to 61½; Chiverton, 2s. to 2½; Grenville, 22s. 6d. to 23s.; South Herodfoot, 17s. 6d. to 22s. 6d.; Seton, 47 to 49; Marke Valley, 7s. to 7½; East Grenville, 2s. to 2½; West Prince of Wales, 7s. 6d. to 10s.; Yudanamutana, 2s. to 3s.; Don Pedro, 3s. to 3½; Chontales, 2s. to 2½.

Mining Correspondence.

BRITISH MINES.

ABRAHAM CONSOLS.—John Vivian, Oct. 1: In the 27, driving east of No. 2 shaft, the lode is 1 ft. wide, producing tin of low quality; the ground is hard. In the 27, driving west of ditto, the lode is 2 ft. wide, with good stones of tin, and indications of improvement, with white decomposed ground about it, very promising for tin.

BEDFORD CONSOLS.—J. Mitchell, Sept. 30: We have cut through the new south lode in the middle adit level, west of cross-cut, which is near 6 feet wide, and looking exceedingly kindly; it is composed of a strong capel, spar, a great deal of muddle, white iron, pyrites, and occasional stones of yellow copper ore. The ground in the eastern lode, by the side of the lode, is still of a congenial character for the production of mineral, and easy for driving. We have commenced to cut into the lode at this point, which, so far as seen, for about 2 feet wide, is composed of capel, muddle, peach, a little white iron, and spots of rich yellow copper ore. We intend to continue the drive by the side of the lode, and cut it through at the same time, in order to expedite the work, as the men will then shut their holes on leaving.

BRYNYSWTH.—J. P. Tregional, Sept. 29: I have been underground measuring the eastern lode, it is 14 fms. 5 ft. into the end. We have finished clearing out all the stuff. I have got some men clearing up the sides of the deep adit level, and in clearing away the skulpings and other stuff from the floors. The rise is 7 fms. 2 ft. high from the bottom of the level; there is a little ore in it now; there is about 15 fathoms more to rise to hole it up to the long drift. There has been some splendid ore broken in this rise. I think we should do well to put four men in this place. A man wanted to take it on tribute about a year ago, if he could have 12 months lease. The old men tell me there are some splendid stones up above this rise; all the stones of ore came out of the stuff of the rise. I will send some of them to the office. The lode in the western end, driving north, is worth 4½. 10s. per fathom. The whin is getting on very well, and I think we may commence drawing out the water on Wednesday. The north cross-cut is getting on very well.

CAPE CORNWALL.—R. Pryor, F. Hosking, Sept. 30: There is nothing particular new to report on this week, with the exception of the lode in the south side of the 100, east of engine-shaft, which is producing good stones of tin; no south wall has been met with as yet. Saturday next being our pay and setting a full report shall be sent you.

CARADON CONSOLS.—S. Bennetts, Sept. 25: We have cut a small branch or two in the 78 north, but no lode as yet; similar branches are seen in the 68 fm. level, some 2 to 3 fms. south of the gossan lode. In the 78 west the lode continues large, yet somewhat disordered; it has within the last few feet made a decided turn north, towards the perpendicular indication. The lode continues to the north. I look on it as a very favourable indication. The lode in the 68 fathoms level west is not looking so well to-day as it did the last time it was taken down, although the north droppers look equally favourable.

CEFN BRWYN.—J. Paull, Sept. 29: The lode at the 80, east of engine-shaft, is 3 ft. wide, of a very promising character, worth 15 cwt. of lead ore per fathom; the same level, going west of the shaft, is in a hard and strong lode, full 9 ft. wide, and the part we are extending the level upon yields 1 cwt. of lead ore per fathom; we have hope to open out a good piece of ore ground shortly. The lode at the 86, at deep adit level east, is 5 ft. wide, composed of spar, carbonate of lime, blende, and clay-slate, intermixed throughout with strings of lead—a very promising lode, and I look forward with great hopes to a discovery of something good hereon; this level is entering a fine piece of virgin ground. In the cross-cut north at the 20 we have within the last few days cut several strings or branches containing spar and small spots of lead and copper, and from the appearance of the ground there is every reason to believe that we are near a lode. The winze below the 56 is communicated to the rise over the 80, east of shaft, which has well ventilated both levels. We had some nice rain here the latter part of last week, which has given us a good supply of surface water, and will enable us to soon get the water out of the bottom of the mine, and resume the driving of the deeper levels.

CHANTICLEER.—William Wasley, Oct. 1: I have set the 90 yard level to drive west of shaft, for this month, at 20s. per yard, and 80s. per ton for ore, the men to fill and land all the stuff, pay for drawing, candles, &c., as usual. The lode in the present level is about 1 foot wide, composed of clay, &c., and is producing some nice lumps of ore. I have put two men to continue the rise in the roof of the 110 yard level, where the lode will at present produce 1 ton of ore per yard, and looking very promising. I am glad to say that we have now got water to dress again, and shall soon have another lot of ore ready for sale.

CUDDRA.—F. Paakey, Sept. 30: In the 142 end, west of Walker's shaft, the men are making fair progress in driving. The rise in the back of the 180 is now communicated with the winze sinking below the 100, which has given good ventilation. The lode in the different stopes is without alteration in value since last reported on. On Friday last we sold 15 tons 12 cwt. 1 qr. 12 lbs. of black tin, which realised 891.

DUKE OF EDINBURGH.—C. F. Collopy, Oct. 2: Since last report we have driven the 45 fm. level west 3 fms. 4 ft., in a very pretty lode. The ore part being the point of a splices formed on the footwall, which promises to open up good profitable ore; in the present end we have just passed through the cross-course, west of which we appear to be getting near the lode. We have discontinued for the present the cross-cut shaft.

EAST ROSEWARNE.—C. Glassey, Sept. 29: Since the last meeting we have divided down King's shaft from the 105 to the 115, cut plat, and driven this level west 5 fms.; lode 12 in. wide, worth 4½. per fm.; present end worth 6½. per fathom. The 115, east of shaft, is driven 10 fms.; for this distance the lode will average 12 in. wide, worth 6½. per fm. The 105, west of shaft, is driven 5 fms. the lode for the first 3 fms. is 8 in. wide, worth 3½. per fm.; the last 2 fms. the lode is 6 in. wide, producing stones of ore, but not enough to value. The rise in the back of this level is up 9 ft.; lode 8 in. wide, unproductive; here we may expect an improvement shortly, and there is a good lode gone down in the bottom of the 95, for more than 40 fms. in length. The 105, east of shaft, is driven 1 fm. 4 ft.; lode 10 in. wide, worth 3½. per fm. The rise in the back of this level is up 4 fms.; lode 8 in. wide, worth 4½. per fm. I calculate to communicate this rise with the 95 in about five weeks from this date. The 95, west of shaft, is driven 10 fms. 3 ft.; lode 12 in. wide, worth from 5½. to 8½. per fm.; present end worth 8½. per fm.; this end is now 61 fms. west of King's shaft. There is nothing done in the bottom of this level, nor shall we be able to until the rise is put through from the 105, to take away the water. The 95, east of shaft, is driven 2 fms.; lode 12 in. wide, producing good stones of copper ore; about 10 ft. above the back of the end, in the stopes, there is a good lode, worth 10½. per fm., dipping towards the end; and, if this ore should continue to hold down, we may expect to meet with it in driving about 4 fms. more. In looking at the different points now in operation, with the expectation of meeting with a good lode in the 95, east of King's shaft, and also in the rise, in back of the 105, with the ore driven through in the 115, I should recommend all the present operations to be carried on with all speed, and also the sinking of King's shaft 10 fms. deeper; this is a very important point, as all the ore in the 115 east is dipping west towards the shaft. The stopes in the back of the 115, east of shaft, is worth 6½. per fm. The stopes in the bottom of the 105, east of shaft, is worth 5½. per fm. The stopes in the back of the 105, east of shaft, is worth 6½. per fm. Two stopes in the back of the 95 east are worth 10½. per fm. each. We have seven pitches working on tribute, by 20 men, at 6s. 8d. to 11s. 11d. We have employed underground and at surface 63 men, 19 boys, and 22 girls. Our engine and pitwork are all in good working condition; water about 4½ strokes per minute.

EAST SNAPELLE.—W. H. Rowe, Sept. 30: Contrary to expectation, I have nothing new to report this week. The hanging part of the lode in the shaft has not yet fully resumed its regular or proper underlay, and rather than carry the whole width from footwall to hanging we had better continue the shaft down to the 35 on the present angle, leaving the hanging part, or a great portion of it, to be fully proved at that depth. Another, though smaller, bed of coarse "rider" has entered the shaft, which accounts for the continued irregularity of the hanging. In taking down King's shaft 10 fms. deeper, it is precisely as last reported—hard and sandy spar, mixed with lead and iron, and I hope we shall manage to get a hold of this part of the lode, in the south-west corner of the shaft, at least. The 20 continues poor, and should there be no improvement by next week I think we had better suspend this driving.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Sept. 26: Setting Report: The 120 to drive east from the shaft, by six men, for plat, &c., at 16½. per fathom, 2 fms. extent; the lode is 15 in. wide, of blöcken and quartz, with occasional stones of ore and tin; we have 19 fms. to drive east to reach the counter lode. The 110, east from the footwall, is a lode 18 in. wide, and the lode is 15 in. wide, containing good copper ore and tin; we hope by Wednesday to be enabled to state its value. The rise above the 110 east, by four men, at 5½. per fm.; lode 18 in. wide, with good ore; in the western end it will produce from 1 to 1½ ton per fm., and laying open good tribute ground. The winze to sink below the 95 east, by four men, at 4½. per fm.; lode 2 ft. wide, worth fully 2 tons of good ore, and also tiny stuff; a pretty lode, and opening good tribute ground. The rise above the 95, by four men, at 3½. per fm.; here we are in the cross-course, but in the bottom of the lode is a lode 18 in. wide, that will yield at least 1½ ton of copper ore per fathom, the ore being very similar to that in the 75 winze; this we think is a good feature to expect a continuation of the ore that is in the winze. The winze to sink below the 75, by six men, at 5½. per fm.; the lode is 16 to 18 in. wide, and it will produce 6 tons of good ore per fathom, for length of winze; we have sunk the winze 11 ft. below the level, from which we calculate that we have broken between 12 and 13 tons of copper ore. We hope against the next survey-day that we shall have holed the winze and the present cross-cut from the shaft, to intersect and intersect the lode, and well ventilate the counter lode, and enable us to set several pitches. In addition to the prices named each party has 2s. 6d. in 17, for carefully saving out the copper ore. The 65 cross-cut is driven 10 fms. 2 ft. 6 in., thus leaving about 6 fms. more to reach the lode. The 55 cross-cut is driven south 12 fms., and leaving about 3½ fms. more to reach the lode; these cross-cuts are being driven by six men each, at 2½. per fm. The 45 cross-cut is driven 8 fathoms, and consequently we have 8½ fms. more to drive to reach the lode; driving by six men, at 2½. per fm. From the above it will be seen that the lode in the 75 winze will be reached at each level within the next month. We have to-day let one pitch to four men at 4s. in 17, and one to two men at 10s. in 17.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Sept. 30: The lode in the 110 east will produce 1½ ton of good grey copper ore per fathom. The lode is improving as it gets away from the cross-course. The men are making good progress with the cross-cuts, and we like the ground in the 55 very much indeed.

EST WHEAL RUSSELL.—W. Richards, Oct. 1: The men have been driving by the side of the lode in the 130 and 100 fm. levels during the past week, where the ground is moderately easy for progress, and contains small branches of quartz, muddle, and yellow copper ore. We shall sample on Monday next the produce for September, about 50 tons of ore, of rather better quality than the last.

EAST WHEAL SETON.—Joseph Vivian and Son, William Thomas, Jun.: At Basset's engine-shaft having reached the 20 fathom level, 40 fms. from surface, we have driven south, and intersected the south part of the lode at 3 feet from the shaft, and find it to be 1½ ft. wide, composed of flook and quartz. These parts will probably form a junction at no distant point, where it is likely the lode will be found productive of copper. We shall be able to speak more fully on this in our next report. Cartwright's shaft is now 31 fms. deep, is quite dry, and the rock continues highly favourable, both for progress and production of metal. We are, therefore, sanguine as to the result of striking the lode, which we shall probably do in sinking (say) 20 fms. deeper. Our present rate of sinking is 4 fms. per month.

GAWTON COPPER.—G. Rowe, G. Rowe, Jun., Sept. 26: The ground in King's engine-shaft, sinking below the 70, is improving, and rapid progress has been made during the past week. The lode in the 70, east of said shaft, is still a fine course of ore, yielding 8 tons per fm. The lode in the stopes in back of the 70 east is worth 4 tons of ore per fathom. The cross-cut driving south through the capel, muddle, and pyrites, is producing very strong muddle, intermixed with high quality yellow copper ore. We shall be in a position to commence a new winze below the 70, on the course of the lode, in a few days. The lode in the 60 east is principally composed of capel, spar, and muddle, intermixed with ore. The lode in the winze, sinking below the 60, is yielding 4 tons of ore per fathom, and showing a very healthy appearance going down. We sampled yesterday (computed) 104 tons of copper ore.

GREAT MONA.—J. Trewin, Sept. 25: The lode in the engine-shaft is somewhat improved in appearance, having more calcareous spar, muddle, blende, and lead ore, with well-defined walls or cheeks on both sides, and, judging from the present good appearances, I expect a further improvement shortly. The engine and pitwork are in perfect good order, and working well.

GREAT NORTH DOWNS.—Wm. Rich, C. Bawden, Sept. 30: The 84, east of Sleggan's, has improved, now worth 10½. per fathom, and ground much easier for driving. The 84 west is also looking better, and yields excellent stones of strong yellow ore. We have commenced to sink in the bottom of the 74, some 6 ft. below the 84, and in the lode is worth 20½. per fathom. We expect the end below will soon enter the run of ore ground. Sleggan's shaft has nearly drained the bottom ends—the 84 east and west. The lode in the bottom of the shaft appears to be gradually changing for the better; we have cut into it a short distance, and it is composed of friable spar, peach, and stones of ore. The stopes west of Sleggan's are worth 12½, 12½, and 10½. per fathom. The 84 end, west of King's, is looking promising to improve; the ground is easier, and the lode carries good stones of ore. The stopes in this level are without alteration to notice—25 and 110 per fathom. Butler's shaft, below the 75, carries good stones of ore, and the composition of the lode of a kindly character. The 75, east of Butler's, has improved, now worth 11½. per fathom. The stopes in the 64 east are worth 15½, 8½, and 6½. per fathom. The ground is easier in the 64 fm. level cross-cut south, and looks very congenial for copper. We have commenced to sink Butler's shaft on the north lode, below the 64; this lode is 2 ft. wide, of a kindly appearance, and yields saving work for copper.

GREAT RETALLACK.—G. R. Odgers, J. Harris, Oct. 1: The lode in the No. 1 shaft, sinking below the 20, is at least 4 feet wide, containing good lead, worth 9 cwt. to the fathom; the composition of the lode, and the kilias in which it is embedded, are all that can be desired for a productive lode in depth. The lode in the 20 south is also 4 feet wide; the leader part is 1 foot wide, with stones of lead; this end is laying open good tribute ground. The lode in the stopes above this level will produce 4 cwt. of lead, per fathom. The lode in the 20 north is 13 inches wide, composed of quartz, &c., very regular and well defined, worth 3 cwt. to the fathom, a kindly lode. The stopes above this level is of much the same value—3 cwt. to the fathom. We have not taken down any lode in the No. 2 shaft this week, but which will be done on Saturday, when you shall know its value, &c. We have not yet drained the winze, but we hope the water is going back; we also hope the lode and the ground in the 30 north are changing.

GREAT SOUTH CHIVERTON.—John Nancarrow, J. George, Sept. 28: The ground in the new shaft is favourable for sinking. The lead continues in the winze below the 30, but is making westward, worth 3 cwt. of lead per fathom. There is not much to report in the 40, a good lode, worth 2½. per fathom, and the lode is likely to improve again very shortly; we have driven through a great length of lead ground in this level. The lode in the 50 west looks very promising for lead; the ground is spare for driving. There is no alteration in the 50 east nor the 40 east.

GREAT SOUTH TOLGUS.—J. Daw, Sept. 30: The shaftmen at Noel's shaft have been employed in the past week in stripping down the branch north of the shaft, and preparing to fix the lift. We have holed the winze from the 140 to the 154, on the tin lode, and shall commence stopping each end of the winze, where we shall break some good work for tin. The lode in the 150, east of Noel's shaft, is 1 ft. wide, unproductive.

GREAT WHEAL VOR UNITED.—S. Harris, G. M. Henty, J. James: We are glad to inform you that our survey passed off very well. We are glad also to state that the 157 fm. level end, west of Ivey's, still holds on well; we have, therefore, put on additional men in this end, and Edward's shaft for the purpose of hoing this shaft and end as quickly as possible. We hope to get down Ivey's shaft, drive 6 feet west, and complete ship-road to the 204 in the next month; we have good stones of tin in the lode in this shaft. We set Metal shaftmen to rise in the back of the north cross-cut, in the 216, to hole with the winze below the 204, which we hope to effect in a fortnight. We have also set the cross-cut south in the 216, which must be very near the lode. The lode in the 204

still holds on rich. The sump-winze, in the 204, is now down over 6 fathoms, and we are glad to say the lode has much improved in size and appearance, and going down more perpendicular. The 204 fm. level end, west of Metal shaft, is looking much more promising; the lode is better defined, muddle laid lying out, and plan coming in, with a great deal of water; we hope to get a lode in the report a good lode at this point. We have holed the rise above the 204 with the winze below the 194, which has given good ventilation to the 204, and opened up a fine piece of ground, which is now available for stopping. We have also set the 194 end to drive west of this winze in order to hole the piece of ground that is standing between this end and the end driving east of the junction with the north part as quick as possible. The lode in the 194, west of Ivey's shaft, is well defined, a kindly nature, and in all through, but the rich part of the lode is in the bottom of the end. The other parts of the mine are looking much the same as last reported. The machinery is in good order, and everything is working satisfactorily.

GREAT WHEAL BADDERN.—Richard Pryor, H. Tregional, Sept. 26: Hill Brothers Engine-Shaft: The ground in the 75 fathom level, on the tin lode, west from the cross-cut, continues just the same for driving as for some time past; and the lode in the 75 end is 5 feet wide, containing some good stones of tin, and looking more encouraging. The lode in the 75, west from the cross-cut, on the Badden lead lode, is about from 2 to 3 ft. wide, producing spar, flook, muddle, and occasional stones of silver-lead; and the ground has been without change during the past week.

GWYDYR PARK.—W. Smyth, Sept. 29: There is no particular change in the shaft at Gwyn Liffon since last report; the lode is still rather disordered; re-set to six men, at 16½. 10s. per fathom; stent the month. In Gwydyr the lode is about 9 in. wide, composed of shale and spar, with a little muddle and blende, and occasional spots of lead ore; re-set to three men, at 37. 15s. per fathom; stent 2 fathoms, or end of the month.

HARWOOD.—W. Vipond, Sept. 29: I have nothing to report from here except the bargains which were set yesterday. The stopes on Trough vein which is very poor, is set to be taken down up to the end, at 17s. per fm. We shall very soon have to begin with the stopes above this when there is better ore. The driving on the north string is about paying cost, and is set to two men, at 53s. 6d. per fm. The level in Richardson's vein is set to two men, at 39s. 6d. per fm. I must have this place surveyed early next week, to see, if possible, if it is actually Richardson's vein, and we are driving upon it; I have some doubts about it.

LOVELL CONSOLS.—W. Chappell, Oct. 1: We are making good progress in driving the 12 west to get under the dip of rich tin discovered in the bottom of the adit; the tin is dipping west, the same as that rich run of tin ground in East Lovell, which are adjoining sets, and parallel lodes; the tin is precisely the same in character as that of East Lovell, therefore from the rich lode seen in the bottom of the adit, and being of the same dip and character as that of East Lovell, I am looking forward to make a valuable discovery before long in the bottom level driving west. Our machinery and pitwork are all in good working order.

MAUDLIN.—John Tregay, Sept. 26: In deep adit east we have driven in the month 3 fms. 2 ft.; set to drive again at 11. per fm.; the lode here produces good stones of copper ore. In back of the end the lode will produce 1 ton of copper ore per fm. In deep adit west we have driven in the month 2 fms.; set to drive again at 4½. per fm.; the lode here produces good stones of copper ore, and promises improvement.

MINERA UNION.—W. T. Harris, Oct. 1: Low's Shaft: The ground in the 75 fathom level cross-cut, west of the lode, is without material change, consisting of white limestone. An increased quantity of water issues from the forebush, and I am daily expecting to intersect the lode. The ground in the 40 fathom level cross-cut, driving east, consists of black limestone, of very congenial character for lead.—Babner's Shaft: The pitch in back of the 80 south is as last reported, worth 1½ ton per fathom. The men are employed in clearing their stuff. The pitch in back of this level north produces occasional stones of lead. The pitch in bottom of this level south is worth 10 cwt. of lead per fathom.—Williams's Shaft: The lode in the stopes in the bottom of the lode is 40 fms. in length, worth 10 cwt. of lead per fathom. The pitch in back of this level is worth 10 cwt. of lead per fathom. We have resumed dressing, and shall lose no time in getting the lead which has accumulated, in consequence of the drought, to about 52 tons, ready for market. Yesterday we weighed 6 tons, realising 117. 17s. 6d. per ton.

MOUNT GABRIEL.—Sept. 29: The driving on the course of Hall's lode from the 30 fm. level cross-cut is a little over 3 fms., and the ground becoming free from the widening of the flook; set on Saturday last at 6½. per fathom. The lode of spar, as noticed in former reports, is crossing the forebush, and in opening the ground, become united. The branch now standing in the end is more than 1 ft. wide, and going down with great regularity. The wall still carries a fine flook, which has now increased from 6 to 8 in. in breadth, and is composed of spar, iron, and other constituents of a promising lode; and, although we are unable to report any discovery of copper ore, we consider it advisable to push on the present end a few fathoms further, which we cannot but think must lead to something decisive. We calculate that about 5 fms. would reach the present cross-cut from the shaft, to intersect and intersect the lode, and being so much nearer to that part already worked would, of course, soon determine the shoot of ore, and which, as before noticed, we would advise carrying out should the present favourable indications in the bottom level show any falling off.

MOUNT PLEASANT.—Wm. Wasley, Oct. 1: Since my last report, owing to the deadness of the air in the 120 yard level, north of Jenkin's shaft, I have been obliged to suspend operations in this part for the present. I have put six men to sink Jenkin's shaft, below the 120 yard level, which is now down 7 yards. The ground in the bottom is just the same as it has been for some years, and we let the shaft to sink until the end of the month, at 80s. per yard. The joint in the bottom of the shaft is about 1 ft. wide, of an open nature, with a little spar, &c. The end driving west of Bright's shaft is producing some nice lumps of ore, and looking very promising.

NEW CLIFFORD.—(Special Report).—William Kito, Sept. 30: At your request I have again inspected the New Clifford Mine, and also very carefully considered your prospects and position, and now beg to lay before you the following remarks:—You are aware that the object for which you put your engine was to test a lode seen in the elvan near the engine-house; and also, by the aid of flat-roads from the engine, to prove a north lode, which, I think, is called Weston's lode. After sinking your main engine-shaft 50 fathoms deep, the first-named lode has so far proved a failure. In the meantime, after sinking Weston's shaft by the flat-roads, the lode (Weston's) was found to change its underlie from north to south; your manager, then, seeing his position, I think very wisely turned the flat-roads aside, and suspended the sinking, as he plainly saw he could drive the water and prove the lode by a cross-cut from the main engine-shaft; this would also prove any intermediate lode which might come in its way. This said cross-cut has been started, and driven 46 fathoms, and is now into a beautiful channel of ground (kilias), in which, when the lode is intersected, it should prove productive. The probable distance you may have to drive you can very much better get from your own agent than I can possibly give you. Returning again to the main engine-shaft, the manager, finding the first lode a failure, and satisfying himself that Penstruthal lode (one of the best in the neighbourhood) could be reached by a cross-cut from the engine-shaft, has continued this said cross-cut, but up to the present no lode has been intersected. This has been a tedious operation, as already it has been driven 65 fathoms. It has now entered the kilias, and from the fact of the rock being faced with sulphur and spots of copper, one might suppose it indicates the near approach of the lode. After duly considering your position, I really cannot suggest any improvement on what you are doing; and, although the mine hitherto has been unproductive when the lode has been intersected and laid open in the kilias, I consider you have reasonable hopes of success.

NEW CROW HILL.—A. Kent, T. Trelease, Sept. 29: At the sump-winze we are making good progress in sinking. We have holed the rise at eastern end of the 55 fathom level pitch, and can work it more conveniently, but it is not quite so productive; here we have four men working at present. We have removed the men that were in the rise at the 55 up to the 35 fm. level, to remove the rubbish, and we intend stopping the bottom of the rise as far as may be thought best. Our surface operations are working satisfactorily. We expect to receive ten men for our lead ore in a day or two.—Wheal Louisa: At the engine-shaft we are sinking with good progress. In the winze sinking below the 60 there is no particular change to notice; we have still a very promising lode, though not richly productive at present; it is 2½ ft. wide, composed of muddle, quartz, blende, with some saving work for lead. At the 60 fm. level end east we have a strong masterly lode, 4½ ft. wide, letting out a large stream of water; the lode is composed of muddle, spar, blende, &c., and is producing stones richly spotted with lead; this end shows the appearance of a lode that is likely to be richly productive if fairly followed out. Our pitwork and other machinery are in good order, and we have a full supply of surface water at both mines.

NEW GREAT CONSOLS.—Richard Pryor, Richard Trathen, Thos. Bennetts, Sept. 28: Ellis's engine-shaft men are progressing very satisfactorily with the cutting down of the shaft for clister-bearers and plunger connection, and no time will be lost in completing this important work. In consequence of the steam-whim boiler having sprung a leak a little delay has occurred during the week, but we are glad to say this has been put all right again, and is now in good condition, with all our machinery, and working well. The tribute department continues just the same as for some time past, and we are still breaking and sending to surface large quantities of copper ore and muddle, the dressing of which is being pushed on as fast as possible.

NEW TRELLEIGH.—Samuel Mitchell, Sept. 29: Our setting, on Saturday last, went off as follows:—A level to drive west, at the bottom of the new shaft, by four men and two boys, at 6½. per fathom; we have met with a vein in the upper part of the level, which is discharging a large quantity of water

seems a very favourable appearance. In the 150, east of Prad's shaft, the lode looks more favourable than it has before, and more water is being let down. The 153 is still worth 40 per fathom, but the water is so abundant that it impedes our progress, however we expect this difficulty will be lessened in course of a short time. On the whole, we consider the prospects of the mine a shade better than they have been.

NORTH DOWNS.—F. Pryor, Sept. 29: There is nothing new in the mine since the report sent you for the meeting, except that we have intersected a lode in the 60 fathom level cross-cut, which we think is Pryor's lode; it is producing stones of ore, but as we have only just commenced operating on it, we cannot say much as to its value, or otherwise; we shall, however, be able to say more about this in our next week's report. We sampled on Wednesday last 126 tons of our usual quality copper ore, and shall send some tin from Pever on Saturday.

NORTH POOL.—Joseph Vivian and Son, Francis Clymo, Oct. 1: In cutting open the Ballarat shaft in the 40 fathom level, as a commencement of sinking, we are much pleased with the large size and excellent appearance of the lode, which, on the north wall, has large veins of copper ore dropping into it; these are likely to produce a favourable effect on the productive character of the lode in depth. The surrounding clay-slate is also of a much more favourable character for the production of copper than any of the strata of the same rock in which we have been hitherto operating; it is also easier for sinking through, and we shall make greater progress than we have hitherto done. The slope in the back of the 40 is producing 2½ tons of copper ore per fathom, and the ore ground is extending to a greater length westward in going up. We shall soon have another parcel of copper ore ready for sale.

NORTH REPALECK.—G. R. Odgers, J. Harris, Oct. 1: We were glad to inform you that the water in No. 1 boundary shaft has got back 3 feet, and there is only 2 feet of water left. We, therefore, feel confident that we shall next week be able to resume the sinking, and make it 10 fathoms below the 10, where we propose to open north under the lead ground driven through.

NORTH ROSKEL.—J. Vivian and Son, R. Angove, Oct. 1: We are busily engaged in putting the Doctor's shaft in complete order for sinking under the 230, now 7 fms. under that level. In the sump-wine under the 230, 25 fathoms west of Doctor's shaft, the lode is producing tin, worth about 300 per fathom. In Pearce's shaft, now about 6 fathoms under the 230, the lode is 2 ft. wide, and producing copper ore, worth 300 per fathom; the shaft appears to be now entering the loose, waxy lode, which we had in the sink, 5 fathoms further west, and is fast draining away the water from the sink. In the 205, east of Pearce's shaft, the lode is 1½ ft. wide, containing ribs of copper ore, and presenting a favourable appearance. In the 205, west of Pearce's shaft, the lode is 1½ ft. wide, containing rich patches of copper ore. In the 140 fm. level cross-cut, south from Wheel Seton, we are still passing through horn-blende rock. In the 21, east of cross-cut, west of Wheel Seton engine-shaft, the lode is about 1½ ft. wide, yielding blende, muddle, and a little copper ore, and presenting a rather favourable appearance. The tin and copper stops are producing as well as they have done for some time.

OKIL TOR.—J. Rodda, Sept. 30: The rise in the back of the 80 east is up 5 fathoms, and for this distance the character of the lode has undergone little change, being 2 ft. wide, yielding a quantity of muddle and 1½ ton of ore per fathom. We have an increase of water coming from the back of the rise, and the ground is still moderately easy for exploring. The western winze, sinking below the 65, is being carried 12 ft. long, and will be down 5 fathoms by Saturday next; the lode here is large, with ore scattered through it to the amount of 5 tons per fathom. The water in the winze continues at about 30 barrels in eight hours. The slopes in the bottom of this level, east and west of the eastern winze, are yielding respectively 5 and 4 tons per fathom, and the slope in the back will yield 2 tons of ore per fathom. We have opened on the course of the lode 4 fathoms east of Gerry's cross-cut; the lode is large, and worth 4 tons per fathom; the ground south of the lode is heavy, and the back of this level is also weak, therefore, we are being slow upon it, and we expect to resume sinking in the 65, as to form the stuff for taking away the backs after the end is a little further advanced. We shall be in a position to drive west of this cross-cut also by setting-day, and I think we shall have quite a good lode in that direction as we now have going east; and, according to the present character of the ground, I calculate to have 4 fathoms driven each way in the coming month. The tributes have raised about 60 tons of ore in the past two months. Our sample for August and September is computed at 270 tons of ore.

OLD GUNN.—Richard, Sept. 30: The ground in the 43 fm. level cross-cut, north from Parker's, is improved for driving. The cross-cut south in the 91 fm. level, at Michael's, is much the same as last week. Upon the whole, the tribute pitches are a little improved since last reported. We are busily engaged dressing, and hope to have a good parcel of ore by next sampling.

PARK OF MINES CONSOLS.—J. Stephens, J. Hooper: The mines are looking just as when we last reported. We find on further research that No. 1 lode is worth 200 per fm., and we have met with some almost solid stones of tin in the cross-course, and being close upon it, we expect to make greater progress. In the 63 east large quantities of tin-stuff are being brought away from here, generally of coarse quality, with occasional rocks of rich work.—Cobbler's: In the 120 east we are cross-cutting to reach the footwall of the lode; the part driven on in the level being of a coarse description, and we believe a great part of the lode to be further south. In the 120 west end the lode produces occasional stones of tin. The lode in the pitches stopping in bottom of this level is worth 200 per fm. In the 110 east cross-cut, the lode is worth 60 per fm.—North Mine: The character of the levels is just as before, and we are now enabled to resume sinking in the 55, west of cross-course, where the lode is worth 150 per fm. The pitches in this part of the mines are looking well, and producing large quantities of tin-stuff. We sold on Thursday at Chyandour 11 tons 2 cwt. 3 qrs. 22 lbs. of black tin, for 614/19s.; and 24 tons 1 cwt. of arsenic, at 37/7s. 6d. per ton. No other change to report.

PENHALE UNITED.—R. Pryor, H. Bennetts, Jos. Pryor, Sept. 29: Friday last being our pay day, the following bargains were set: Phillips's engine-shaft, to 200, at 200 per fathom, and 200 per fathom, which the lode is 2 ft. wide, worth 3 cwt. of lead per fathom. We have to sink 7 ft. deeper, when we shall fix a plunger-lift, after which we shall be able to sink the shaft with much greater speed, and for less cost. The 90, to drive north of shaft, by three men and three boys, at 37/5s. per fathom; lode 2 ft. wide, and worth 4 cwt. of lead per fathom; this level to drive south of shaft by four men, at 37/5s. per fathom; lode worth 3 cwt. of lead per fathom. The 80, to drive south of shaft, by two men and three boys, at 37/5s. per fathom; lode worth 2 cwt. of lead per fathom, and likely to improve. Hail's shaftmen are engaged in dropping the lift below the 80, and so far as the shaft is in fair condition. We have commenced clearing the 80, north of this shaft. The tribute pitches continue just the same as for some time past.

PENHALE WHEAL VOR.—W. H. Martin, Sept. 30: At our pay, on Friday last, I set as follows:—The engine-shaft men to continue their bargain to ease and divide the shaft from the 84 to the 94, cut plat and ground for winze brace, put in penthouse for winze, and being close upon it, we expect to make greater progress. By the end of next week we shall complete the above. Penhale Lode: Ritchie's shaftmen also to continue their bargain, to ease and divide the shaft from the 50 to the 60, cut plat and ground for winze-brace, and complete the work necessary to enable us to resume sinking below the 60, for 23/10s., which will be completed this week. The 60 to drive east of Ritchie's shaft, 1 fathom stent, at 37/10s.; the lode is 10 inches wide, composed of peach, prian, and stones of tin. We are getting on very well in securing the stalls in the adit level; also set five tribute pitches at 13s. each and one at 10s.

PENHALLS.—S. Bennetts, W. Higgins, Sept. 25: The cross-cut from the diagonal shaft, at the 70, is extended north about 10 ft., and the lode just cut into, but is not quite cut through; so far as can be seen it is equally as productive as when it left the shaft. We are not satisfied with the branch in the 60 east as being the main part of the lode, and have, therefore, set the men to drive a little further south, to see if it may be in that direction. The 60 west is without change and the 50 north, on the other hand, has just passed through a large gossan, but no lode found as yet. The 45 east is now a fine, and the 40 east is poor. The 40 west, on the Pink Lode, is looking very promising, yet not very productive, and ground easy. At the Pink Mine the lode in the winze below the 30, at Shop shaft, is of a most promising character; large, and tinny throughout. The slope in the back of the 30 west is without any important change. The various pitches throughout the mine are producing their usual quantity of stuff, without much variation.

PERRAN DR. LEAD.—M. Wadley, Sept. 30: We have taken down more of the lode both at the side and in the bottom of the level, and find it continuing more and more valuable than when last reported on, and being fully satisfied that nothing but depth is required to command large deposits of rich ore, we have commenced to clear the shaft below the level, and by next it is probable that I can report the result from this point.

PRINCE OF WALES.—J. Gifford, W. Gifford, Sept. 28: On Saturday last the following bargains were set:—To drive the 65 east by six men, stent 4 fathoms, at 7/10s. per fathom; here the lode was full 200 per fathom. The 65 west, to drive by six men, stent 4 fms., at 7/10s. per fathom; lode 3 ft. wide, worth 23/10s. per fathom. The two ends are looking well, with an appearance of further improvement. To drive the 55 east by four men, stent 4 fms., at 4/10s. per fathom; here we have intersected the south wall of the lode east of cross-course, but as yet nothing has been done to prove its size or quality; the killas by the side of it is precisely the same as where we had all our best branches of ore. To sink a winze in the 55 east, by nine men, stent 2 fms., at 12/10s. per fathom. We have been sinking by the side of the lode, where it was when last taken down, worth 15/10s. per fathom. We shall take down the lode some time this week. We have a stop in the back of the 55 east working by six men, where the lode is worth 30/10s. per fathom. To drive the 55 west by four men, stent 3 fms., at 4/10s. per fathom; lode at present poor. To drive cross-cut in the 55 west, towards the supposed new south lode, stent 4 fms., or cut the lode, at 5/10s. per fathom, the ground being favourable for driving, and highly mineralised, with small branches of rich ore intersected. A stop in the back of the 55 west, by six men, stent the month, at 3/10s. per fathom; lode worth 15/10s. per fathom. To drive the 45 west by two men, stent 2 fms., at 4/10s. per fathom. We have six men stopping on the supposed new south lode, where it is worth 15/10s. per fathom. The tribute pitches are looking well, and the tributes getting good wages, at 9s. in 11.

—Sept. 29: I have just come up from underground with the Duchy agent (Capt. Symons), who allows me to use his name as valuing the lode in the 65 east at 32/10s. per fathom, and the western end of the lode at 12/10s. per fathom.

PROSPER UNITED.—J. Hall, F. Bennetts, Oct. 1: The 100, west of Hand's, is looking better, but as the lode is not cut through in the present end we cannot at present ascertain its full value; the part carried is worth 9/10s. per fm. for tin, and judging from the character of the lode, and knowing that the end is getting under the run of tin ground gone down in the 90; we consider this a very important feature. The 90, west of Hand's, is worth 6/10s. per fathom for tin. The 80, west of Hand's, is worth 8/10s. per fathom for tin and copper. The slopes in back of this level are worth on an average 6/10s. per fathom for tin and

copper. The 80 east, on Gwallon lode, is poor. The 70 east, on Gwallon lode, is worth 5/10s. per fathom for copper. The slopes in back of this level are worth 6/10s. per fathom for copper. The 60 west, on Pope's lode, is looking better, now producing saving work for tin. The slopes in this level are worth 4/10s. per fathom for tin. The 50 west, on Pope's lode, is improving, worth 4/10s. per fathom for tin. The winze sinking below this level is worth 10/10s. per fathom for tin. The slopes in back of this level are worth 14/10s. per fathom for tin. The 40 west, on Pope's lode, is worth 5/10s. per fathom for tin. The slopes in the back of this level are worth 8/10s. per fathom for tin. The slopes in back of the 100, east of Hand's, are worth 12/10s. per fathom for tin and copper. The 80, east of Louisa's, is poor. The slopes in the back of the 80, east and west of cross-cut, on Moor lode, are worth on an average 9/10s. per fathom for tin. The 40 east is producing saving work for tin. No change in any other part of the mine.

REDMOOR.—T. Taylor, Oct. 1: We have opened a little on the lode west end of cross-cut at the 25 fm. level; it is large, letting out a deal of water, and containing good stones of tin. I intend breaking a few tons, and take a sample. There is no change in the ground east of the cross-cut. We have the horse-whim at work on the new shaft and clearing the eastern end of the lode stuff broken down from the slope. We are desling the lode in the western end; ground easy, and I think the lode is large.

ROSECLIFF AND TOLCARN.—R. Pryor, Sept. 30: No change has taken place in this mine worthy of notice since our last report, with the exception of meeting with an increase of water in the old engine-shaft sinking below the 30. We shall be able to say more of the lode in the 30 in our next report.

ROARING WATER.—H. Thomas, Sept. 29: The ground in the south cross-cut is very much changed, and now set at 37/10s. per fathom. From the indications I think we are near a lode. There is no particular change in the north cross-cut. **ROYALTON.**—M. Rickard, Sept. 28: I have carefully inspected the above mine. There is a large and powerful engine, with 20 tons of boilers, two ample fly-wheels, shaft connections, &c., sufficient to drive 120 heads of stamps. The dressing-floors are in good condition and laid out according to the modern principles of tin dressing, yet are still capable of further improvement. The engine-shaft is sunk 25 fathoms from the surface (perpendicular), and the water drained to that depth. Drivings or levels have been extended on the course of the elvan at the 25, but little has been done by way of stopping or excavating. Very large quantities of stuff can now be obtained from this part at comparatively little cost, and the character of the stuff is such as to warrant large and profitable returns. The average width of the elvan, so far as seen, is from 60 to 70 feet, with a multitude of branches crossing it at right angles, all of which contain tin, more or less. Some of these branches are very rich for tin, varying in size from 1 in. downward. A leader of tin 1 in. wide, compact and solid, will yield in a lineal fathom, or 36 feet, 12 cwt. of tin. It will be wondered at, that from a very inconsiderable pit, upwards of 700 cwt. of tin has been extracted. The working of the past company has been exceedingly limited. The most inferior portions of the elvan have had to be taken away in the past month or two, and for the present have occasioned a temporary inconvenience, both as regards the working and the returns of tin. But this does not in any way interfere with the real value or intrinsic worth of the property, or its success in the future working. It undoubtedly contains all the elements of success, and by careful and judicious management will become one of the best properties in the county. The elvan runs through the entire length of the set, and operations can be conducted at various places at one and the same time, thereby giving an almost inexhaustible supply of tin-stuff. The mining and open workings can be carried on simultaneously, and the present points of operation opened out to much greater advantage. The tramway shaft is now communicated with the 25, and a few days will suffice for laying down the rails. A better class of stuff will then be sent to the stamps, and the workings generally put on a more advantageous and extended scale. There is no question as to quality or quantity; this has been already proved. 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The present representatives are more additional stuff can be obtained at various places at one and the same time, thereby giving an almost inexhaustible supply of tin-stuff. The mining and open workings can be carried on simultaneously, and the present points of operation opened out to much greater advantage. The tramway shaft is now communicated with the 25, and a few days will suffice for laying down the rails. A better class of stuff will then be sent to the stamps, and the workings generally put on a more advantageous and extended scale. There is no question as to quality or quantity; this has been already proved. The present representatives are more additional stuff can be obtained at various

ever we have cut an increase of water, coming from the capels of the lode, which augurs well for improvement. In the 210 north we have cut into the leading part of the lode which looks very promising; we have about 2 fms. more of the capel to strip down to reach the extreme end, and hope to speak favourably of this point in our next advice. The winze in advance of this end, in bottom of the 196, we shall still sink by the side of the lode until a communication is effected. A stope in bottom of the 196, still further north, is worth 26l. per fathom. In the 162 south we have a very kindly lode, worth 5l. per fathom. At Smith's engine-shaft, in the 210 north and south, very little has been done in either of the ends since our last report, in consequence of a breakage which let in the water; this, however, is again put all right, and the drainage is going on vigorously. In the 196, north of Chippindale's shaft, it is pleasing to say the lode is still worth 14l. per fathom. We shall sample to-morrow (Wednesday) a little above our estimated quantity, 70 tons.

THE SOUTH AFRICAN GOLD FIELDS—BLAKE'S STONE-BREAKER.—For some time past the powerful little machine introduced into this country at the close of the International Exhibition of 1862 by Mr. H. R. MARSDEN, of the Soho Foundry, Leeds, has found extensive and continually increasing employment in connection with our mines; but, although its simplicity and efficiency have frequently been referred to in the *Mining Journal*, the actual cost of crushing a ton of ore with it is, perhaps, still known only to those who are using it. From the large number of mines in England, in Australia, and in California (where five machines are in full work on a single mining property, that of Colonel Frimont), there are great facilities offered in every mining district for those interested to inspect the machines in actual work; and, as the manufacturer has now received a testimonial that one of his machines is crushing hard ores at a cost of only 1d. per ton—including steam-power, labour, and oil—its great economy will be apparent, the cost when ordinary machinery is used averaging fully six times that amount. It is now proposed to send it to the newly-discovered gold fields of South Africa, where its great simplicity, the small amount of power it takes, and the large amount of work it will do, are sure to cause it to be thoroughly appreciated. But few ore-crushing machines have had the advantage of being so speedily adopted, and but few have enjoyed such a continuation of gratifying success; not only have its merits been recognised by the award of prizes at the various Exhibitions, but all who have practically applied it have willingly certified its excellence.

THE TIN TRADE, AND ITS PROSPECTS.—The excellent price obtained for the tin offered at the Dutch sale on Wednesday must be a matter for congratulation to all interested in the prosperity of the tin trade, more especially as every possible effort had been made both here and in Holland to depress the market by the offer of the metal, "ex next sale," at prices much below that justified by the relative position of supply and demand for the article. The whole of the 89,587 slabs having been cleared off at 54½ fls. has, no doubt, discomfited the "bears," many of whom lose about 5 per cent. upon the price. The rumour circulated at the beginning of the month produced temporarily a bad effect on the market, but its inaccuracy having since been established, firmness has been entirely restored, and, as Mr. L. Th. van Houten very truly remarks, there is everything to indicate "a better and brighter prospect for our tin market in future." The demand for tin is infinitely better than at the corresponding period of last year, whilst the stock is at least 1500 tons less—the total stock of Banca is at present only 177,133 slabs, against 189,650 slabs at the corresponding period of last year, whilst the yield of British tin has much diminished—the figures for the last two years published showing a diminution of more than 11 per cent., the diminution having been from 9990 tons in 1866 to 8700 tons in 1867. But for this fact it would have been difficult to account for the large quantity of the Banca tin purchased at the sale by English smelters at a first cost of 94l. 10s. per ton. The result of the sale has caused considerable animation in the shares of tin mines generally, and it is understood that the opportunity will be availed of to commence the development of a very valuable concession for a tin property in the East Indies, covering some hundreds of English square miles. Whether considered from a geological or mineralogical point of view, it is impossible to find a region which offers more favourable data for the presence of rich stream tin deposits than the property included in the concession, and in this respect it can certainly vie with the best parts of either Banca or Billiton. The tin lies at a depth of from 5 to 25 ft. from surface, and is only covered with sand and clay; sufficient exploratory operations have been effected, and at the points which promise immediate returns everything has been prepared for commencing operations at once. The services of an engineer of considerable experience at Banca, and plenty of skilled labour being readily obtainable, arrangements could be at once entered into for raising the tin by contract at (say) 20 fls. per pecul, which (considering that 54½ fls. per pecul was realised in Batavia at public sale only so lately as August 12 for 5000 peculs of Billiton tin of certainly not better quality) would leave a profit of more than 34 fls. per pecul, or nearly 44l. per ton of tin, so that ample return for outlay might be obtained without sending too much tin into the market. Whether for British or foreign tin mines the prospects are excellent, and there is no reason to fear that those prospects will be blighted.

GOLD MINING IN ITALY.—The report of Mr. Arthur Dean upon the Pestarena Mines has been issued to the shareholders. Every detail is fully entered into, and many valuable suggestions are made with reference to the future working of the properties. Mr. Dean describes the mines as essentially good, and capable of great and profitable extension; that a large amount of expensive work has been executed to bring the mines into a proper state, from which results in gold are now only beginning to arise, but will be greatly augmented when those works approach their completion; that the execution of the permanent works, simultaneously with seeking to get out a large produce of gold at too early a period, has delayed profits, which upon a different system would now be in a course of realisation to a large extent; that the works for the development of the mines are well planned, and as they approach completion are likely to produce good returns; that the new reduction-works are well built and arranged, and the machinery for direct amalgamation is of the first-class, and not surpassed anywhere; that with two years grace for the completion of the necessary works the shareholders will probably be relieved from all anxiety with respect to large dividends in the future; and that the mines and reduction works have been, and are still well managed, and that fair value is represented by the work done.

FRONTINO AND BOLIVIA.—It is satisfactory to observe that the position of this undertaking still appears to improve. As will be seen by the advices (which appear in another column), Mr. Rouch states that the Italia Mine suit has been unconditionally gained, and that he considers that fact the "most important occurrence which has taken place since he undertook the management of the mines." He has also gained the Mulatos suit, and the addition of these mines to the company's property is most valuable to the concern. He states, also, that Frontino will become a capital mine in driving 15 fathoms further. A remittance of 318 ozs. of gold has been received, and Mr. Rouch promises to send the produce of some "jacques," a sample of which received, some time ago, gave the enormous result of 24l. from merely 12 lbs. weight of stuff. It is gratifying that Mr. Rouch repeats that the anticipations of success he and his able colleague, Greiff, have formed will be gradually and ultimately fully realised.

MINING EXCHANGE.—At the annual meeting of members, on Wednesday, a resolution was passed re-electing Mr. Peter Watson the Chairman of the institution for the ensuing year.

RAILS OF PERMANENT WAY, CONTRACTORS' AND COLLIERY SECTIONS, CHAIRS, FISH-PLATES, SWITCHES, AND CROSSINGS.
Sundry lots of RAILS, suitable for sidings, &c., ON SALE, by—
MR. ROBERT WRIGHTSON, NEWPORT, MONMOUTHSHIRE.

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MESSRS. NICHOLLS, MATHEWS, AND CO. have FOR SALE ENGINES OF VARIOUS SORTS AND SIZES, AND SEVERAL GOOD TEN TON BOILERS. All are in excellent condition, and well worthy the attention of purchasers.
Full particulars may be obtained by applying to Messrs. NICHOLLS, MATHEWS and Co., Tavistock Foundry, Tavistock.

M. R. J. S. M. E. R. R. Y.
ANALYTICAL CHEMIST, SWANSEA.

* With last week's Journal a SUPPLEMENTAL SHEET was given, which contains a description of Wilson's Puddling Boiler and Furnace (illustrated)—Original Correspondence: Letters on Special Education for Working Men—the International Congress of Working Men—Mineral Properties—Investment in Coal and Slate Properties—Notes of a Journey to Western America—Sterne's Springs for Mine Cages (illustrated)—Generation of Steam-power by Gas (Jackson's Patent) (illustrated)—Steel and Iron Boilers—Mineral Production of the Zollverein—A Model Railway Company, &c., &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, OCT. 2, 1868.			
COPPER.			
Best selected, p. ton	75	0	0
Tough cake and tile	73	0	0
Sheeting & sheets	77	10	0
Boils	74	0	0
Bottoms	71	0	0
Old (Exchange)	68	0	0
Burra Barra	89	0	0
Wire, per lb.	0	10½	0
Tubes	0	11½	0
BRASS.			
Sheets, per lb.	7½	d.	8½
Wire	8d.		
Tubes	10½	d.	
Yellow Metal Sheath, p. lb.	6½	d.	7d.
Sheets	6½	d.	6½
SPELTER.			
Foreign on the spot, £20	5	0	20
to arrive	20	10	0
ZINC.			
In sheets	£24	10	0
TIN.			
English blocks	66	0	0
Do., bars (in barrels)	67	0	0
Do., refined	98	0	0
Banca	£96	0	0
Straits	95	0	0
TIN-PLATES.			
IC Charcoal, 1st qua.	1	5	6
IX Ditto, 1st quality	1	11	6
IX Ditto, 2d quality	1	4	6
IX Ditto, 2d quality	1	10	6
IX Coke	1	6	2
IX Ditto	1	7	8
Canada plates, p. ton	13	10	0
Ditto, at works	12	10	0
IRON.			
Bars Welsh, in London	6	10	0
Ditto, to arrive	6	10	0
Nail rods	6	15	0
Stafid, in London	7	10	0
Bars ditto	7	10	0
Hoops ditto	8	2	0
Sheets, single	9	2	0
Pig No. 1, in Wales	3	15	0
Refined metal, ditto	4	0	0
Bars, common ditto	6	0	0
Do., mch. Tyneor Wales	6	10	0
Do., railway, in Wales	6	0	0
Do., Swed. in London	10	0	10
To arrive	10	0	10
Pig No. 1, in Clyde	2	14	3
Do. f.o.b. Tyneor Wales	2	9	6
Do. Nos. 3, 4, f.o.b. do.	2	6	2
Railway chairs	5	10	0
spikes	11	0	12
STEEL.			
Indian Charcoal Pigs	7	0	7
In London, p. ton	7	0	7
LEAD.			
English Pig, com.	19	0	10
Ditto, LB.	19	5	0
Ditto, WB	21	10	0
Ditto, sheet	20	0	0
Ditto, red lead	31	0	0
Ditto, white	37	0	0
Ditto, patent shot	22	0	22
Spanish	18	10	0

* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—The fluctuations that have taken place in our market are of trifling extent, notwithstanding there has been rather more animation this week than lately.

COPPER.—The demand has not been so good, and sellers in consequence have submitted to lower prices. The prospects of the market are not particularly encouraging. Yellow metal is to be bought at easy rates.

IRON.—The orders given out for rails have had the effect of imparting a firm tone to the market, and enabling ironmasters to command increased rates. Merchant bars continue to hold a good position, and buyers have to pay full prices. Some of the Staffordshire works are quoting 6s. per ton higher for bars, hoops, and nail rods, but this advance does not appear to be very freely paid. In Swedish bars there has not been quite so much doing, but prices have not in the least given way, and as the season for shipments from Sweden is now drawing to a close it is not improbable a gradual improvement may take place. Very little change is recorded in the value of Scotch pigs—a steady market for most part, with no greater variation in price than 3d. to 6d. per ton.

LEAD.—The demand for Russia, America, and China continuing good, sellers have succeeded in obtaining slightly enhanced rates; it is thought that the disturbances in Spain may in some measure interfere with supplies from that country, and should there be any serious falling off an important rise may be experienced.

SPELTER.—The stock in London is reduced to 894 tons, but this does not seem to help the market, as the demand remains inactive.

TIN.—The leading event of the week has been the sale of Banca at Rotterdam, which took place on Wednesday. The quantity brought forward consisted of 89,587 slabs, which realised 54½ fls., also 1421 slabs of Billiton, at 54 fls. The demand exceeded the supply 25 per cent., and orders had to be reduced accordingly. The buying was by no means evenly distributed, and, unlike most former occasions, there have been no lots offering since the sale at the price and terms of the sale. Many "bears," no doubt, have been caught, and will have to cover at a considerable loss. Prices of Banca and Straits are both rapidly advancing, and will maintain a more elevated position than hitherto. On "Change our market was very excited, and buyers were very anxious to secure tin. A little Straits had changed hands during the day at 94l., and afterwards 94l. 10s. was offered and refused, holders asking 96l., but it did not transpire that this was realised. The price of Banca since the sale has advanced to 56 fls., and the market closes with a strong upward tendency.

TIN-PLATES.—A slight reduction has been made in prices, and buyers experience less difficulty in placing orders at their limit.

STEEL.—A few sales have been effected in Swedish keg, and prices at present have undergone no actual change, although the market assumes an upward tendency.

QUICKSILVER.—No alteration to note in the quotations of this metal.

THE TIN TRADE.—Mr. L. Th. van Houten (Rotterdam, Sept. 28) writes:—Our tin market opened very firm in the beginning of the month, but was thrown into a very unsettled state on the arrival of the East India mail, reporting the existence of a large stock of tin in the island of Banca on March 31 of about 89,000 peculs. Several parties crediting this report, and nobody being able to give satisfactory explanation about it, lower prices were accepted by some holders, and a large business was also done for delivery ex next sale at declining prices. Subsequently official information, given by the Colonial Department, has shown that a large stock of tin always accumulated in Banca at that time of this year, kept back by great difficulties in shipping to Java during that period (the stock of tin in Banca on Jan. 31, 1867, being 85,000 peculs), and confidence was consequently very soon restored, buyers coming forward for large quantities, which again brought prices to their former level, holders mostly refusing to sell, in expectation of the result of the Trading Company's sale of the 30th inst. The following figures, as we believe, fully warrant a better and brighter prospect for our tin market in future. The production of English tin for 1867 shows (see last week's *Mining Journal*) a great falling off with last year—8700 tons, against 9990 tons in 1866. The floating quantity of Banca tin now on the way to Holland is much smaller than was generally expected, it being now only 13,150 peculs, equal to 815 tons, whilst the actual export of Straits tin from Penang and Singapore to England and the Continent from Jan. 1 to July 31 this year is only 49,247 peculs, against 64,259 peculs same time last year. Banca tin was sold at 54 fl. in the beginning of the month, but upon the receipt of the news from Banca, referred to above, the price went down to 52½ fl., which was also accepted for some lots deliverable ex next sale. Confidence returning upon the explanation officially given by the Colonial Department, a good demand sprang up, and 54 fl. on the spot, and 53½ fl. deliverable ex next sale, was paid, large quantities of the latter changing hands, and there are still buyers to-day for both descriptions at these quotations. Billiton tin has followed the same course as Banca, and 52 fl. was accepted for floating parcels and 52½ fl. for tin on the spot; however, the market recovering again, 53 fl. and 53½ fl. respectively were again paid, at which prices there are still buyers. In the public sale of 8000 peculs Billiton tin, held in Batavia on Aug. 12, 54½ fl. per pecul was paid, equal to 52½ fl. ex ship here. The position of Banca tin in Holland on Sept. 28, according to the Official Returns of the Dutch Trading Company, shows—

	1868.	1867.	1866.
Import in September	18,746	8,269	7,327
Total nine months	85,309	77,628	161,889
Deliveries in September	12,170	9,786	7,950
Total nine months	98,317	85,043	118,705
Total second hand	65,892	187,996	199,269
Unsold stock	111,241	1,654	34,564
Total stock	177,133	189,650	233,813
Stock of Billiton	6,309	9,522	—
Import in September	4,300	—	—
Deliveries in September	4,550	—	—
Quotation (Banca)	54 fl.	55 fl.	46½ fl.
Sept. 28 Billiton	53½	53½	45½

These returns, compared with those of 1867, exhibit—An increase of the import for September of 325 tons, an increase of the import for the nine months of 258 tons, an increase of the deliveries for September of 24 tons, an increase of the deliveries for the nine months of 511 tons, a decrease of the stock second hand of 378 tons, an increase of the unsold stock of 339 tons, a decrease of the total stock of 388 tons, and a decline of the quotation of Banca of 17. 13s. per ton. The quantity of Banca tin now afloat for the Dutch Trading Company is 13,150 peculs,

equal to 815 tons, against 19,600 peculs, equal to 1215 tons, last year. The Government returns for the month of July are as follows:—

EXPORT OF TIN FROM HOLLAND.			
	1868.	1867.	1866.
Germany	181	152	1265
Belgium	134	39	939
England	16	3	329
France	35	102	124
Hamburg	14	15	160
United States	22	—	54
Other countries	11	29	199
Total	413	338	3061
Exports of Straits tin from Penang and Singapore to England and the Continent, from January 1 to July 31:—	1868.	1867.	
To England—Penang	Peculs 35,381	Peculs 34,432	
"Singapore	12,432	28,893	
To the Continent—Penang	—	—	921
"Singapore	1,464	—	
Total	49,247	64,259	

THE COPPER TRADE.—Messrs. Turnbull and Watson (Liverpool, Sept. 30) write:—Copper (foreign): The improved demand (principally French) caused an advance in bars from 67l. to 68l. per ton on the spot, at which considerable sales were made; but as this demand has entirely ceased, and the English consumers do not seem inclined to pay the advance, the business in the latter part of the fortnight has been very limited. In Chilian refined ingots, a large business has been done; those of the Consuelo brand have been sold as low as 69l. to arrive, and 69l. 5s. to 69l. 10s. on the spot, owing to their irregular quality compared with Urmenita, which has realised about 70l. to 71l., and in one instance for a parcel at Swansea of especially good quality, 72l. per ton. The total business comprises about 620 tons of bars, spot and to arrive, at 67l. to 68l.; about 885 tons ingots at 69l. to 72l.; a cargo of Chilian ore and regulus, by tender here, at 13s. 9½d., and one, to arrive at Swansea, at 13s. 10d. per unit. Some small transactions at 78l. 10s. for Wallaroo, and 79l. 10s. for Barra Barra. Arrivals from the West Coast South America during the past fortnight:—Cape Horn, at Valparaiso, 5 tons ores, 14 tons regulus, 75 tons bars; Delmira, ditto, 60 tons bars. At Swansea—Cornwall, 620 tons regulus, 136 tons ingots; Rosetta, 626 tons regulus. Sales since our last have been:—

Mine or ship.	Tons.	Price.	Mine or ship.	Tons.	Price.
Bars—Cotopaxi	113	£67 10	Bars—Lota	50	£67 10
Ing.—Lota	225	69	Ing.—Lota	153	69
Bars—Urmenita	150	67	Ing.—Urmenita	50	72
Bars—Salado and	46	68	Ing.—Urmenita	50	70
Thos. Elythe	20	68	Ing.—Urmenita	50	69
Bars—Medora	20	68	Ing.—Urmenita	50	67
Bars—Lota	50	67	Ing.—Urmenita	50	71
Bars—Banco & Urmen	59	68	Ore—Chilian	650	0 13 10
Bars—Thuto	74	68	Ore—Canadian	215	0 13 10
Bars—Serenia	30	68	Ing.—Urmenita	100	72
Ing.—Lota	70	69	Chilian ore & reg.	650	0 13 9½
Ing.—Lota	100	69			

Stocks of copper produce (Chilian and Bolivian) in first and second hands:—
Ores, Regulus, Bars, Ingots.
Liverpool 1644 4678 4678 1025
Swansea 1947 1554 469 85
Total 3591 2239 5138 1110

Messrs. Vivian, Younger, and Bond (Oct. 2) write:—This week shows quite a dearth of business as regards Chilian produce, not a single transaction in either bars, ores, or regulus being reported. Buyers seem satisfied for the present, and, in the absence of real business, importers do not care to name the prices at which they might sell. Nominally, however, the market is a shade lower than last week. Nevertheless, quite moderate buying would doubtless in the present state of things cause previous prices to be quickly reached. English and fine foreign copper have been very quiet. Wallaroo has again fetched 78l. 10s.

The settlement of the fortnightly account took place on the MINING SHARE MARKET on Wednesday, and was heavy in one or two stocks, but the market for cash and next account has not been particularly active since our last, and the chief business confined to Prince of Wales, East Grenville, Marke Valley, East Caradon, Chiverton Moor, Chontales, Yudanamutana, West Chiverton, West Seton, Wheel Seton, and a few others. The standard for copper ores advanced on Thursday 17. 2s. per ton, and the half-yearly sale of Banca tin, which took place in Holland on Wednesday, seems to have given general dissatisfaction. The whole stock offered was sold at 54½ fls., and it is hoped that prices will now improve in Cornwall.

Marke Valley, 7½ to 7½; in our last there was a clerical error in the quotation, which should have been 7½ to 7½, instead of 6½ to 6½, as sent us through the Mining Exchange List. Prince of Wales shares have been largely dealt in, and leave off 41s. to 43s.; the 65 east is now worth 20l. per fathom; the 65 west, 25l. per fathom; the winze below the 55 is worth 15l. per fathom; and the new south lode, 15l. per fathom. We understand the agent for the Duchy of Cornwall inspected the mine on Sept. 30, and values the 65 east at 32l. per fathom, and the 65 west at 25l. per fathom. West Chiverton, 60l. to 61½; Bedford Consols, 12s. 6d. to 15s.; Bedford United, 32s. 6d. to 35s.; Chiverton Moor, 6½ to 6½. East Basset, 8 to 10; at the meeting, held on Sept. 29, the accounts showed a balance against the company of 330l. 8s. 7d., but no call was made. The loss on two months was 320l. 19s. 10d. In the 130 fm. level 8 fathoms have been driven south towards the lode, and as the water is increasing the agents hope soon to cut a good lode for copper. East Grenville, 2½ to 2½; the lode in the 110 east is 12 to 15 in. wide, worth 1½ ton per fathom. Wheel Grenville, 20s. to 25s.; the 66 west has improved to 2 feet wide, worth for tin 20l. per fathom. Calbeck Fells, 7s. 6d. to 12s. 6d.; Glan Alun, 12s. 6d. to 13s. 6d.

Great Laxey, 17½ to 18; the accounts published preparatory to the annual general meeting, to be held at Douglas, on the 14th inst., show sales of lead from Jan. 3 to Aug. 7, 1868, of 1300 tons, realising 29,337l. 10s.; blende, 7326l. 9s. 9d.; copper, 1068l. 15s.; total, 37,732l. 14s. 9d. (less 6697l. 6s. credited last account). The stock of ore on hand is valued at 9365l. The labour cost paid amounted to 16,947l. 18s.; bills, 2980l. 13s. 4d.; royalty, 2298l. 9s. 4d.; and dividends (17th and 18th), 15,000l.; which, after other several payments, leaves a balance in hand of 10,455l. 5s. 4d. The statement of assets and liabilities shows a balance of assets of 22,176l. 14s. 2d. Chontales, 2½ to 2½; Devon Great Consols 375 to 400; Drake Walls, 7s. 6d. to 10s.; East Caradon, 3 to 3½; East Lovell, 6½ to 7; Frank Mills, 40s. to 45s.; Frontino and Bolivia, 13s. to 14s.; Great Retalack, 3 to 3½; Great Wheel Vor, 11 to 12, ex div.; Herodsfoot, 40 to 42½; New Lovell, 2 to 2½; South Herodsfoot, 17s. 6d. to 22s. 6d.; a branch has been cut in the 100 cross-cut. North Crofty, 1½ to 1½; Don Pedro, 3 to 3½; Yudanamutana, 2½ to 3½; North Treskerby, 5s. to 7s. 6d.; Providence Mines, 22 to 24; Tincroft, 12½ to 13½; West Caradon, 2 to 3; West Drake Walls, 7s. 6d. to 10s.; West Seton, 152½ to 157½; Wheel Basset, 65 to 70; Wheel Kitty (St. Agnes), 2½ to 3; Wheel Seton, 45 to 50; Wheel Trelawny, 8 to 9. Wheel Chiverton shares have undergone as great fluctuations this week as they did last, for, declining suddenly from 3 to 1½ sellers, they rose again on Friday, and left off 2½ to 2½. A Wheel Uny meeting, this day (Friday) the returns for the quarter gave a profit of 271l. 5s. 11d., and the balance in favour of the mine was 382l. 6s. 9d. The 140 east is reported worth 40l. per fm., in the rise 40l., and the reserves of tin greatly increasing.

The Market for Mine Shares on the Stock Exchange during the week has been quiet; prices have, however, been fairly maintained. There has been a steady demand for Don Pedro, at 2½ to 2½ prem.; Yudanamutana are firm, at 2½ to 3½; Pestarena shares enquired for, at 1½ to 1½; Del Rey shares are steady, at 19 to 19½; Anglo-Brazilian, par to 3; Chontales shares have been dealt in to some extent, at 2½ to 2½; Rossa Grande maintain their premium of 3-16 to 5-16; Frontino are better, being last quoted at 1½ to 1½; United Mexican, 1½ to 2½; Port Phillip, 1½ to 1½. British Mines have been dealt in to a moderate extent. Great Laxey shares are very firm, at 17½ to 18, ex div.; West Chiverton, 60l. to 61½; Chiverton, 2½ to 2½, after many fluctuations; Chiverton Moor, 6½ to 6½. Prince of Wales, 41s. to 43s.; a great improvement has taken place in the 65, or bottom level, and the mine generally is looking well. At Great Rhosomors, the lode in the shaft sinking below the 70 fm. level has improved; they have 55 tons of lead for sale for the month. Glan Alun, 12s. 6d. to 13s. 6d., and improving.

IRISH MINE SHARE MARKET.—The demand for mining shares has resumed a much better tone, in consequence of the satisfaction afforded by the Killaloe Slate Quarry Company, and the directors' report to the company's next half-yearly general meeting, to be held on the

in the price of shares, which closed at, but hardly sustaining, 12½s. 6d. per share (2½s. 10s. paid), and they range now from 12½s. 10s. buyers, 12½s. 6d. sellers, for cash. But the demand is not great at even the lower quotation. Mining Company of Ireland shares derived some benefit from the improvements in the other mining shares, and have advanced from 15½s. 2s. 6d., last week's closing price, to 15½s. 5s., and are much wanted at that figure. There are, however, several offers to sell at 15½s. 10s. (7½s. paid). Connors shares have not been taken for the last few days at the previous quotation of 4s. 6d. per share, but there are enquiries for them at 4s. 3d. Killaloe Slate Quarry shares continue firm, at 18s. 6d., ex dividend. Cape Copper shares commanded 12½s. 5s., but are not much dealt in.

The directors' and agent's reports on the Killaloe Slate Quarries, on the left bank of the Shannon, county Tipperary, have not yet resumed the importance which they commanded some 25 years ago, when the quarries were worked by an English proprietary, under the title of the Imperial Slate Company, and when more than 700 men and boys found lucrative employment there, and about 10,000 tons of slate per annum were returned. But an old-fashioned and improvident system of working of late years has imposed much labour and loss of time to remove debris from off some of the best parts of the slate vein, which when accomplished, with the necessary perseverance and engineering skill, will, undoubtedly, re-open a vast field for further profitable employment of the fine and industrious race of people of that neighbourhood, and handsomely reward the present owners. Much credit is due to them that in the comparatively short time they have been at work they have succeeded in removing so much of the ill-effects of former mismanagement, and bringing the quarries again into a profitable state of working; and there can be no doubt that if they persevere with the same energy which they have hitherto brought to bear on the property it will prove one of the most successful enterprises of the kind in Ireland. By the directors' report, it appears that the last half-year's total receipts for slates and increase of stock amount to 4794½l. 16s. 11d., against a total expenditure of 3882½l. 4s. (including interest on borrowed capital), leaving a net surplus of 912½l. 12s. 11d. This amount would have enabled the company to declare a dividend of 10 per cent., and to carry 100½l. to the credit of the current half-year. But the directors, in the face of the amount due to the company's bankers, considered it more prudent to recommend the payment of a dividend of 6 per cent. only, which the shareholders have adopted. In the gross receipts during the past six months there is an increase over the corresponding period of last half-year from 3988½l. to 4794½l., or of 806½l., while in the expenditure there is an increase only of 272½l., or from 3610½l. to 3882½l. At the same time, great progress has been made in more effectually laying open the quarries for future working, by the removal of large quantities of waste, and by further clearing the unproductive overburden. Besides this, the machinery at present necessary is in excellent condition and efficiency, comprising two steam-engines, dressing and hoisting machinery, &c., so as to render the prospects of future good results from the quarries most satisfactory.

During the quarter ending Sept. 30 the quantity of copper ore, the produce of Cornwall and Devonshire, sold at the Cornish Ticketing, was 28,414 tons, which contained 1852 tons 9 cwt. of fine copper, and realised 113,064½l. 3s. 6d., being equal to an average of 37½s. 6d. per ton of ore, and 61½s. 1s. per ton of copper in the ore. During the same period the British, colonial, and foreign ores sold at Swansea amounted to 11,572 tons, which contained 1477 tons 11 cwt. of fine copper, and realised 100,875½l. 7s. 6d., being equal to an average of 9½l. 10s. 6d. per ton of ore, and 68½s. 6d. per ton of copper in the ore. The average produce of the ore sold at the Cornwall Ticketings was 6½ per cent., whilst that sold at Swansea gave an average produce of 12½ per cent. From this it will be seen that the aggregate sales by ticket were 39,986 tons of ore, containing 3330 tons of fine copper, and realising 213,939½l. The subjoined is a summary of the periodical sales at the Cornwall and Swansea Ticketings respectively:—

The ores sold at the Cornwall Ticketings were—									
Date.	Stand.	Prod.	Per ton.	Per unit.	Tons.	Fine cop.	Amount.		
July 2..	109	5	6½	£3 10	128,104	1,667	102	4	6,579 6 0
" 9..	108	1	5½	3 10	12	4	1482	87	5,399 13 6
" 23..	104	6	6½	3 10	12	4	3483	224	15
" 30..	97	15	7½	4 10	10	1½	2413	179	1
Aug. 6..	102	15	6½	3 10	11	9	3093	193	5
" 13..	105	14	6½	3 10	11	9	2318	136	8
" 20..	105	3	6½	4 0	12	5½	3754	241	6
" 27..	97	9	7½	4 10	12	5½	1622	127	2
Sept. 3..	103	5	6½	4 2	6	12	4½	1669	111
" 10..	104	19	5½	3 4	0	11	3½	1156	65
" 17..	104	19	6½	3 18	0	12	4	3522	223
" 21..	98	7	7½	4 6	6	12	0	2236	160
Total for the quarter.....					28,414	1,852	9	113,064	3 6
Quarter ending June, 1868.....					31,644	2,026	9	141,281	0 6
Quarter ending March, 1868.....					29,781	1,942	4	133,390	19 6
Quarter ending December, 1867.....					30,981	2,058	3	142,140	6 4
Total for the year.....					120,820	7,879	5	529,876	10 0
Showing a quarterly average of.....					30,205	1,969	15	132,469	2 6
Corresponding quarter, Sept., 1867.....					20,410	2,008	14	137,216	19 0

The ores sold at the Swansea Ticketings were—									
Date.	Stand.	Prod.	Per ton.	Per unit.	Tons.	Fine cop.	Amount.		
July 14..	291	4	6	£11 15	10	13s. 10½d.	2802	476	7
" 21..	89	17	0	10½	7	3	7	13	9,620 12 0
Aug. 11..	89	9	0	10½	6	12	0	1886	190
Sept. 1..	92	4	6	13½	9	5	8	13	26,573 13 0
" 22..	90	6	6	16½	11	8	2	13	19,190 7 0
Total for the quarter.....					10,572	1,477	11	100,875	7 6
Quarter ending June, 1868.....					12,297	1,883	3	141,023	10 6
Quarter ending March, 1868.....					5,127	869	1	61,906	3 6
Quarter ending December, 1867.....					10,532	2,083	9	148,827	12 6
Total for the year.....					38,628	6,813	4	432,632	14 0
Showing a quarterly average of.....					9,657	1,678	6	113,158	3 6
Corresponding quarter, Sept., 1867.....					8,881	1,202	0	86,033	8 6

At Redruth Ticketing, on Thursday, 2535 tons of ore were sold, realising 9239½l. 6s. 6d. The particulars of the sale were:—Average standard, 103½s. 2s.; average produce, 6½; average price per ton, 37½s.; quantity of fine copper, 157 tons 4 cwt. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Sept. 3..	1689	103	5	0	7½	£4 2 6
" 10..	1155	104	10	0	6½	3 4
" 17..	3522	104	19	0	6½	3 18
" 24..	2236	87	7	0	7½	4 6
Oct. 1..	2635	103	2	0	6½	3 18
Total for the quarter.....						12,297
Quarter ending June, 1868.....						12,297
Quarter ending March, 1868.....						5,127
Quarter ending December, 1867.....						10,532
Total for the year.....						38,628
Showing a quarterly average of.....						9,657
Corresponding quarter, Sept., 1867.....						8,881

Compared with last week's sale, the advance has been in the standard 1½s., and in the price per ton of ore about 1s. 6d. Compared with the corresponding sale of last month, the decline has been in the standard 1½s., and in the price per ton of ore about 1s. 3d.

The following dividends were declared during September:—

Mine.	Per share.	Amount.
Great Laxey	£0 10 0	£ 7,500 0 0
Devon Great Consols	0 0 0	6,144 0 0
South Crofty	0 0 0	2,500 0 0
Great Wheal Vor	0 7 6	2,215 10 0
Tincroft	0 5 0	1,500 0 0
Foxdale	0 10 0	1,400 0 0
East Pool	7 10 0	960 0 0
Wheal Mary Ann	0 17 6	896 0 0
Providence	0 10 0	560 0 0
South Crofty	0 10 0	468 10 0
Don Pedro North del Rey	0 3 0	11,424 6 0
Alamillos	0 2 0	3,500 0 0
Fortuna	0 2 6	3,125 0 0
Linares	0 3 4	2,500 0 0
Total.....		£44,758 6 0

The EAST PLYNIMMON LEAD MINING COMPANY, with a capital of 7000l., in shares of 20l. each, has been formed for developing the Blaengwe grant, which adjoins the celebrated Plynlimmon Mine, and is on the same lode. The adit level at Plynlimmon has been driven 110 fathoms in a lode averaging for the whole of that distance 1 ton of lead ore per fathom, the present end of the level being 10

3 tons per fathom, and is now within 90 fathoms of East Plynlimmon boundary. In East Plynlimmon grant a valuable mine can be laid open cheaply and expeditiously. Another important fact is that the Plynlimmon lode has been discovered at the eastern boundary of the East Plynlimmon grant (on the opposite side from Plynlimmon Mine), where it shows good lead ore, and is of excellent character, and from this point an adit can be driven westward on the course of the lode and quickly gain 40 fathoms of backs; this discovery is most important. The prospectus will be found in another column of this day's Journal.

The DUKE OF EDINBURGH MINING COMPANY has been constituted on the Cost-book System, with 6000 shares of 5s. each, one-half of which are retained by the present proprietors in consideration of upwards of 7000l. expended by them upon the available works, the remainder being offered to the public to provide working capital for further extending the works, as proposed in the manager's report. The whole amount thus raised (less 36½s. 2s. 6d., which includes duty fees and all costs up to the end of August, and represents the only liability against the company) will be entirely devoted to developing the undertaking, and called up as required, in sums not exceeding 6d. per share. The property to be worked is situated in Calstock, and is surrounded by several mines which have paid good dividends, and others which have yielded large returns. The facilities both for cheap and expeditious development are unusually great, and the indications of abundant deposits of copper all that can be desired. The mine has been inspected by Messrs. H. Rickard, H. James, and J. Goldworthy, and their reports are most encouraging. Several promising lodes have already been laid open—one worthy of particular attention. An engine-shaft has been sunk 20 fms. and well timbered, and at 15 fms. from surface a cross-cut has been put out north about 3½ fms., and intersected the lode, which is fully 6 ft. wide, with a south underlay of about 8 in. in a fathom, composed principally of gossan of the finest description, with spots of black copper ore, holding out every characteristic of making a good and productive lode at an early period. It is recommended to sink the engine-shaft to a 40 fathom level, and then drive upon the lode, when a good course of ore may be anticipated. The pursership of the mine has been placed in the hands of Mr. Thomas Grenfell, and Messrs. W. B. and C. F. Collom, of Calstock, are appointed the managers.

At South Caradon Mine meeting, on Tuesday, the accounts for May and June showed a profit of 2879½l. 4s. 6d. A dividend of 2560l. (5l. per share) was declared; and 3188½l. 17s. 8d. carried to credit of next account. Mr. Peter Clymo reported that "the mine is still looking well, and although, in consequence of the low state of the standard, we have thought it advisable to reduce our dividend, yet there is every reason for feeling assured we have a profitable and lasting mine."

At South Wheal Crofty Mine meeting, on Monday, the accounts for four months ending August showed a profit of 483½l. 2s. 9d. A dividend of 468½l. (10s. per share) was declared; and 331½l. 8s. 5d. carried to credit of next account. Mr. Edward Heale Rodd, the pursuer says—"I can make no promise as to future dividends; every economy consistent with the efficient and liberal development of the mine will continue to receive the attention of myself and the agents. From various sources of reliable information which I have received, I consider the copper market, as regards Cornish adventures, to be precarious, but the reports in the papers are very fluctuating, and perhaps the safe course for a pursuer to adopt under such circumstances is to make no promises, especially as the returns of ore are not so favourable at the present time as at the last meeting of the adventurers."

At Foxdale Mines (Isle of Man) meeting, on Sept. 26, the directors declared a dividend of 10s. per share.

At the Providence Mine meeting, on Wednesday, the accounts showed a credit balance of 950½l. 8s. 9d. The profit on the three months amounted to 691½l. 7d. A dividend of 560l. (10s. per share) was declared, leaving a balance of 379½l. 8s. 9d. to be carried forward to the credit of the next account. The report stated that, on the whole, the mine continues to look well.

At the East Rosewarne Mine meeting, on Wednesday (Mr. Sims in the chair), the accounts showed a debit balance of 351½l. 15s. 6d. A call of 2s. per share was made. The Chairman thought the financial position of the mine was quite satisfactory as could have been fairly expected, considering the monthly returns, and the low price of copper. The report of the agents appears in another column.

At Wheal Uny meeting, yesterday (Mr. McCallan in the chair), the accounts showed a credit balance of 382½l. 6s. 9d. The profit for the three months amounted to 271½l. 15s. 11d. Details in another column.

At the Miners' Union meeting, held at the Wynnstay Arms, Wrexham, on Sept. 25 (Mr. William Low in the chair), the accounts for the twelve months ending July showed a debit balance of 452½l. 12s. 8d. A call of 2s. 6d. per share was made on the new shares, and a resolution was passed authorising the directors to exercise the borrowing powers under the company's articles to the extent of 1000l. It was explained that there was about 600l. and 700l. worth of ore broken and at surface, which could not be dressed for the want of water, but that difficulty had now been removed. The Chairman moved that the report and accounts be received and adopted. The resolution having been duly seconded, Mr. W. Ward of London strongly urged that a cross-cut should be put out from Brabner's and Low's shafts, and also between Low's and the Lower Eistedford Mine, which is to the south. The report of Mr. W. T. Harris stated that the returns at present are from 12 to 15 tons of lead per month, but when Low's shaft is further developed he has no doubt this quantity will be considerably increased. The several points of operation are prosecuted with economy and dispatch, and there is every reasonable encouragement to expect, when thoroughly carried out, together with those recommended, a good and profitable mine will yet be the result. Messrs. Mercer, Knowles, and Fugh, the retiring directors, were re-elected.

At Sparne Consols Mine meeting, on Sept. 22, the accounts showed a debit balance of 89½l. 8s. The report of the agent stated that there were twelve pitches working on tribute, varying from 12s. to 18s. in 1½: 90 persons were employed in the mine.

A telegram was received yesterday afternoon from the agent of East Wheel Grenville, saying a branch had just been intersected in the 55 ft. level cross-cut, worth 1½ ton of copper ore per fathom. This is not the lode, which is still a head.

The Bank of England return for the week ending on Wednesday evening showed, in the ISSUE DEPARTMENT, an increase in the "notes issued" of 129,245½l., which is represented by a corresponding increase in the "coin and bullion" on the other side of the account. In the BANKING DEPARTMENT there is shown a decrease in "other deposits" of 465,063½l., and in the "rest" of 8458½l., together 470,521½l.; and increase in the "public deposits" of 190,457½l.; and in the "seven day and other bills" of 16,432½l.; together, 266,889½l. = 266,832½l. On the asset side of the account there is an increase in the "Government securities" of 150,000½l., and in the "other securities" of 367,907½l. = 517,907½l., showing a total decrease in the reserve of 784,629½l.

COAL MARKET.—The fresh arrivals this week number 114 ships. The colder weather produced an active demand for house coals, and a large business was done at an advance of 3d. to 6d. per ton on last week's quotations. Hartley's in steady request, and advanced 3d. Hetton Wallsend, 19s. 6d.; Hartlepool Wallsend, 17s. 9d.; Tees Wallsend, 18s. 9d.; Gosforth Wallsend, 16s.; Kellow Wallsend, 16s. 9d.; South Hartlepool, 16s. 9d.; New Belmont Wallsend, 16s.; Trimdon Grange Wallsend, 15s. 6d. Unsold, 7 cargoes: 15 at sea.

WANTED, a good secondhand high-pressure STEAM ENGINE for winding purposes, cylinder 24 to 30 in. diameter, stroke 4 ft. 6 in. to 5 ft., with drum for round wire ropes, brake, and all fittings; also one cylindrical egg-ended BOILER, 30 ft. by 5 ft. 6 in., with all fittings and mountings complete; TWO PULLEYS for 1½ round ropes, 12 ft. diameter, with pedestals, brasses, &c., complete; also any useful COLLIERY MATERIALS. The whole machinery, although secondhand, must be comparatively new, and in a good solid working condition. Particulars, stating LOWEST CASH PRICE, delivered at the Buckley Station of the Wrexham, Mold, and Connah's Quay Railway, to be addressed to Mr. SAMUEL P. WARD, Peel's chambers, 156, Cheapside, London; and to Mr. T. J. COTTINGHAM, M.E., Mold, Flintshire; from the latter of whom all details can be obtained.

WANTED, a SECONDHAND DIRECT-ACTION WINDING ENGINE, or PAIR, of about 125-horse power, of modern construction, and in good condition. Apply, with price and particulars, to Mr. JOHN MILLWARD, Civil and Mechanical Engineer, 27, Paradise-street, Birmingham.

FOR SALE (a bargain), A CORNISH PUMPING ENGINE, of 240-horse power, in good condition. Applications to be addressed to "H. J. R.," MINING JOURNAL Office, 26, Fleet-street, E.C.

FOR SALE, THIRTY TONS OF NEW RAILS, of FLANGE SECTION, 40 lbs. per yard, with patent wrought-iron chairs and fish-plates. Apply to Mr. ROBERT WRIGHTSON, Newport, Monmouthshire.

FOR SALE—AN OFFER WANTED.—The "MINING JOURNAL," with INDEX, &c., complete, for the years 1865, 1866, 1867. Apply to "G. D.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

MINING JOURNALS FOR SALE, SEVENTEEN VOLUMES (two bound), at 12s. 6d. per volume for the whole. Address, "X. B.," MINING JOURNAL Office, 26, Fleet-street, E.C.

CHINA CLAY, DEVON.—SEVERAL CLAY SETTS in the neighbourhood of PLYMOUTH, near railway and water carriage, TO BE GRANTED TO RESPONSIBLE PARTIES. Apply to C. L. RADCLIFFE, Solicitor, Plymouth.

MANAGING DIRECTOR OF A COLLIERY.—The proprietors of a COLLIERY in NORTH WALES are about to establish a JOINT-STOCK COMPANY for working it on a larger scale, and are DESIROUS of MEETING with a GENTLEMAN practically acquainted with COAL MINING, TO TAKE THE OFFICE of MANAGING DIRECTOR, bringing in a proportion of the additional capital to be employed. Principals only will be treated with, and the strictest references will be given and required; but liberal terms will be made with a suitable applicant. Apply to R. H. PEACOCK, Esq., Solicitor, 3, South-square, Gray's Inn, London.

MANAGER, OR ASSISTANT MANAGER.—The Advertiser, who is well qualified, SEEKS an ENGAGEMENT as above, in a MINE, REDUCTION, or CHEMICAL WORKS, either at home or abroad. Address, "F. C. S.," Post Office, No. 166, Fulham-road, S.W.

TO COAL AND IRONMASTERS, ROPE MAKERS, OIL MERCHANTS, AND OTHERS.—A GENTLEMAN of active business habits, and considerable commercial experience, with a first-class connection amongst COLLIERY OWNERS and IRONMASTERS, is open to UNDERTAKE AGENCIES for the SALE of IRON, IRONSTONE, &c., and all kinds of articles used at COLLIERIES and IRONWORKS. Has represented a respectable firm for upwards of 20 years. Highest references and security, if required. Address, "W. F.," Post Office, Burslem.

TO IRONMASTERS, COALMASTERS, AND OTHERS.—TO BE LET, at PRESTHOPE, near MUCH WENLOCK, upon the Wellington and Craven Arms Railway, Great Western Railway, VALUABLE LIMEWORKS, QUARRIES, in complete working order, offering great facilities for burning lime for agricultural and hydraulic purposes, and for raising fluxing stone, without further outlay. Lease, nine years to run. Demand large. Address, "E. B.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

TO CAPITALISTS.—A NEW AND IMPORTANT COAL FIELD, 500 acres in extent, TO BE LET, ON LEASE. It adjoins the River Dee, about four miles below CHESTER, near SANDYCROFT IRONWORKS, HAWARDEN, FLINTSHIRE, and is intersected by the Chester and Holyhead Railway; thus being in a superior position for supplying by sea and land important markets in Great Britain and Ireland. The MAIN COAL, and numerous other valuable associated seams and minerals, have recently been proved by a series of borings.

For particulars, and terms of the proposed lease, apply in the first place to HENRY BECKETT, F.G.S., Consulting Mining Engineer, Wolverhampton. Permission to inspect, and local information, can be obtained from the E-tato Agent, GREGORY BURNETT, Esq., Dee Cottage, Queen's Ferry, Flint. None but Principals need apply.

IRON ORE INVESTMENT TO BE DISPOSED OF.—TO BE DISPOSED OF, BY PRIVATE TREATY, either in part or the whole, VALUABLE IRON ORE WORKS, having large deposits of ore recently developed, in the MINERAL DISTRICT near WHITEHAVEN. Address, "A. B.," Post Office, Whitehaven.

IMPORTANT MINING PROPERTY FOR SALE IN RHENISH PRUSSIA.—A BLEND MINE, giving 3 to 4 tons of blende per fathom; a COPPER MINE, averaging 14 per cent. of copper; and THREE LEAD MINES, with 65 per cent. of lead. Apply for particulars, to O. J. YOUNGHUSAND, Esq., Wiehl, Kreis Gummersbach, near Cologne, Prussia.

A TURBINE WATER WHEEL (Schielle's Patent) FOR SALE.—Power, 5-horse to 10-horse; speed, 100 to 200 revolutions per minute; consumption of water, 700 gallons to 1400 gallons per minute. Power, speed, and consumption of water all regulated by a governor. Admirably suited for working where a small running stream or reservoir of water, rain or otherwise, is at hand, superseding entirely the use of steam. For further particulars, apply to Messrs. TAYLOR and Co., Britannia Works, Birkenhead, where the turbine can be seen. It is quite new.

STEATITE, OF THE FINEST QUALITY.—The Undersigned is in a position to SUPPLY BUYERS of this article with LARGE or SMALL QUANTITIES, as required, at the shortest notice; and from the extent of deposit, advantageous geological situation, and close proximity to sea and railway communication, TWENTY PER CENT. BELOW THE USUAL MARKET VALUE. Samples on application. EDMUND SPARGO, PRACTICAL MINING ENGINEER, LANERCHYMEDD, ANGLESEY.

THE FORTUNA COMPANY (LIMITED).—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the shareholders in this company will be HELD at this office on THURSDAY, the 8th October next, at Two o'clock P.M., to receive the accounts, balance-sheet, and reports of the directors and auditors for the half-year ending 30th June last. By order of the Board, H. SWAFFIELD, Secretary.

5, Queen-street-place, Upper Thames-street, London, Sept. 29, 1868.

THE LINARES LEAD MINING COMPANY (LIMITED).—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the shareholders in this company will be HELD at this office, on THURSDAY, the 8th October next, at half-past Twelve o'clock P.M., to receive the accounts, balance-sheet, and reports of the directors and auditors for the half-year ending 30th June last. By order of the Board, H. SWAFFIELD, Secretary.

5, Queen-street-place, Upper Thames-street, London, Sept. 29, 1868.

THE ALAMILLOS COMPANY (LIMITED).—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the shareholders in this company will be HELD at this office, on THURSDAY, the 8th October next, at a quarter past One o'clock P.M., to receive the accounts, balance-sheet, and reports of the directors and auditors for the half-year ending 30th June last. By order of the Board, H. SWAFFIELD, Secretary.

5, Queen-street-place, Upper Thames-street, London, Sept. 29, 1868.

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 25—	Great Laxey	103	£22 11 6	Stock and Co.
	Bwlch Consols	36	13 16 6	Walker, Parker, & Co.
	Bwadrain Consols	25	11 8 6	ditto
	Cargill	70	17 15 0	Panther Smelting Co.
Oct. 1—	Brynpostig	23	11 0 0	Sims, Williams, & Co.
	Foxdale (Chats)	60	11 16 0	Sheldon, Bush, & Co.

BLACK TIN.								
Date.	Mine.	Ts.	c.	q.	lbs.	Price p. ton.	Amount.	Purchasers.
Sept. 25—	Cuddra	15	12	12	..	—	£891 0 0—	—
Oct. 1—	Wheal Uny	9	3	2	13	.. £ 54 0 10	.. 496 2 10—	—

ever we have cut an increase of water, coming from the capels of the lode, which augurs well for improvement. In the 210 north we have cut into the leading part of the lode which looks very promising; we have about 2 fms. more of the capel to strip down to reach the extreme end, and hope to speak favourably of this point in our next advice. The winze in advance of this end, in bottom of the 196, we shall still sink by the side of the lode until a communication is effected. A stop in bottom of the 196, still further north, is worth 26l. per fathom. In the 152 south we have a very kindly lode, worth 5l. per fathom. At Smith's engine-shaft, in the 210 north and south, very little has been done in either of the ends since our last report, in consequence of a breakage which let in the water; this, however, is again put all right, and the drivage is going on vigorously. In the 196, north of Chippindale's shaft, it is pleasing to say the lode is still worth 14l. per fathom. We shall sample to-morrow (Wednesday) a little above our estimated quantity, 70 tons.

THE SOUTH AFRICAN GOLD FIELDS—BLAKE'S STONE-BREAKER.—For some time past the powerful little machine introduced into this country at the close of the International Exhibition of 1862 by Mr. H. R. MARSDEN, of the Soho Foundry, Leeds, has found extensive and continually increasing employment in connection with our mines; but, although its simplicity and efficiency have frequently been referred to in the *Mining Journal*, the actual cost of crushing a ton of ore with it is, perhaps, still known only to those who are using it. From the large number of mines in England, in Australia, and in California (where five machines are in full work on a single mining property, that of Colonel Fremont), there are great facilities offered in every mining district for those interested to inspect the machines in actual work; and, as the manufacturer has now received a testimonial that one of his machines is crushing hard ores at a cost of only 1½d. per ton—including steam-power, labour, and oil—its great economy will be apparent, the cost when ordinary machinery is used averaging fully six times that amount. It is now proposed to send it to the newly-discovered gold fields of South Africa, where its great simplicity, the small amount of power it takes, and the large amount of work it will do, are sure to cause it to be thoroughly appreciated. But few ore-crushing machines have had the advantage of being so speedily adopted, and but few have enjoyed such a continuation of gratifying successes; not only have its merits been recognised by the award of prizes at the various Exhibitions, but all who have practically applied it have willingly certified its excellence.

THE TIN TRADE, AND ITS PROSPECTS.—The excellent price obtained for the tin offered at the Dutch sale on Wednesday must be a matter for congratulation to all interested in the prosperity of the tin trade, more especially as every possible effort had been made both here and in Holland to depress the market by the offer of the metal, "ex next sale," at prices much below that justified by the relative position of supply and demand for the article. The whole of the 89,587 slabs having been cleared off at 54½ fls. has, no doubt, discomfited the "bears," many of whom lose about 5 per cent. upon the price. The rumour circulated at the beginning of the month produced temporarily a bad effect on the market, but its inaccuracy having since been established, firmness has been entirely restored, and, as Mr. L. Th. van Houten very truly remarks, there is everything to indicate "a better and brighter prospect for our tin market in future." The demand for tin is infinitely better than at the corresponding period of last year, whilst the stock is at least 1500 tons less—the total stock of Banca is at present only 177,133 slabs, against 189,650 slabs at the corresponding period of last year, whilst the yield of British tin has much diminished—the figures for the last two years published showing a diminution of more than 11 per cent., the diminution having been from 9990 tons in 1866 to 8700 tons in 1867. But for this fact it would have been difficult to account for the large quantity of the Banca tin purchased at the sale by English smelters at a first cost of 94l. 10s. per ton. The result of the sale has caused considerable animation in the shares of tin mines generally, and it is understood that the opportunity will be availed of to commence the development of a very valuable concession for a tin property in the East Indies, covering some hundreds of English square miles. Whether considered from a geological or mineralogical point of view, it is impossible to find a region which offers more favourable data for the presence of rich stream tin deposits than the property included in the concession, and in this respect it can certainly vie with the best parts of either Banca or Billiton. The tin lies at a depth of from 5 to 25 ft. from surface, and is only covered with sand and clay; sufficient exploratory operations have been effected, and at the points which promise immediate returns everything has been prepared for commencing operations at once. The services of an engineer of considerable experience at Banca, and plenty of skilled labour being readily obtainable, arrangements could be at once entered into for raising the tin by contract at (say) 20 fls. per pecul, which (considering that 54½ fls. per pecul was realised in Batavia at public sale only so lately as August 12 for 5000 peculs of Billiton tin of certainly not better quality) would leave a profit of more than 34 fls. per pecul, or nearly 44l. per ton of tin, so that ample return for outlay might be obtained without sending too much tin into the market. Whether for British or foreign tin mines the prospects are excellent, and there is no reason to fear that those prospects will be blighted.

GOLD MINING IN ITALY.—The report of Mr. Arthur Dean upon the Pestarena Mines has been issued to the shareholders. Every detail is fully entered into, and many valuable suggestions are made with reference to the future working of the properties. Mr. Dean describes the mines as essentially good, and capable of great and profitable extension; that a large amount of expensive work has been executed to bring the mines into a proper state, from which results in gold are now only beginning to arise, but will be greatly augmented when those works approach their completion; that the execution of the permanent works, simultaneously with seeking to get out a large produce of gold at too early a period, has delayed profits, which upon a different system would now be in a course of realisation to a large extent; that the works for the development of the mines are well planned, and as they approach completion are likely to produce good returns; that the new reduction-works are well built and arranged, and the machinery for direct amalgamation is of the first-class, and not surpassed anywhere; that with two years grace for the completion of the necessary works the shareholders will probably be relieved from all anxiety with respect to large dividends in the future; and that the mines and reduction works have been, and are still well managed, and that fair value is represented by the work done.

FRONTINO AND BOLIVIA.—It is satisfactory to observe that the position of this undertaking still appears to improve. As will be seen by the advices (which appear in another column), Mr. Rouch states that the Italia Mine suit has been unconditionally gained, and that he considers that fact the "most important occurrence which has taken place since he undertook the management of the mines." He has also gained the Mulatos suit, and the addition of these mines to the company's property is most valuable to the concern. He states, also, that Frontino will become a capital mine in driving 15 fathoms further. A remittance of 318 ozs. of gold has been received, and Mr. Rouch promises to send the produce of some "jaquas," a sample of which received, some time ago, gave the enormous result of 24l. from merely 12 lbs. weight of stuff. It is gratifying that Mr. Rouch repeats that the anticipations of success he and his able colleague, Greiff, have formed will be gradually and ultimately fully realised.

MINING EXCHANGE.—At the annual meeting of members, on Wednesday, a resolution was passed re-electing Mr. Peter Watson the Chairman of the institution for the ensuing year.

RAILS OF PERMANENT WAY, CONTRACTORS' AND COLLIERY SECTIONS, CHAIRS, FISH-PLATES, SWITCHES, AND CROSSINGS. Sundry lots of RAILS, suitable for sidings, &c., ON SALE, by—
Mr. ROBERT WRIGHTSON, NEWPORT, MONMOUTHSHIRE.

1. ENGINES AND BOILERS FOR SALE.

Messrs. NICHOLLS, MATHEWS, AND CO. have FOR SALE ENGINES OF VARIOUS SIZES AND TYPES, AND SEVERAL GOOD TEN TON BOILERS. All are in excellent condition, and well worthy the attention of purchasers.
Full particulars may be obtained by applying to Messrs. NICHOLLS, MATHEWS and Co., Tavistock Foundry, Tavistock.

M. R. J. S. M. E. R. R. Y. ASSAYER AND ANALYTICAL CHEMIST, SWANSEA.

With last week's Journal a SUPPLEMENTAL SHEET was given, which contains a description of Wilson's Puddling Boiler and Furnace (illustrated)—Original Correspondence: Letters on Special Education for Working Men—the International Congress of Working Men—Mineral Properties—Investment in Coal and Slate Properties—Notes of a Journey to Western America—Sterne's Springs for Mine Cages (illustrated)—Generation of Steam-power by Gas (Jackson's Patent) (illustrated)—Steel and Iron Boilers—Mineral Production of the Zollverein—A Model Railway Company, &c., &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, OCT. 2, 1868.

COPPER.				IRON.			
Best selected.	£ s. d.	£ s. d.	Per ton.	Bars Welsh, in London	6	10	0-6 12 6
Tough cake and life	73	0	74 0 0	Ditto, to arrive	6	10	0-—
Sheathing & sheets	77	10	0 78 0 0	Nail rods	6	15	0 7 0 0
Boils	78	0	—	Do., Swedish, in London	7	10	0-8 10 0
Bottoms	81	0	—	Do., ditto	7	10	0-8 10 0
Old (Exchange)	68	0	0 70 0 0	Hoops ditto	8	2	6 0 15
Barra Barra	80	0	—	Sheets, single	9	2	6-11 0 0
Wire	0	0	10½	Pig No. 1, in Wales	3	15	0-4 5 0
Tubes	0	0	11½	Refined metal, ditto	4	0	0-5 0 0
BRASS.				STEEL.			
Sheets	per lb.	7¾d.-8½d.	Per ton.	Bars, common ditto <td>6</td> <td>0</td> <th>0-—</th>	6	0	0-—
Wire	8d.	—	—	Do. much. Tyneor Tees			
Tubes	10¼d.	—	—	Do., railway, in Wales	6	0	0-—
SPELTER.				Do., in London			
Yellow Metal Sheet.	per lb.	6¼d.-7d.	Per ton.	To arrive	10	0	10-0 5 0
Sheets	6¼d.-7d.	—	—	Pig No. 1, in Clyde	2	14	3-2 18 3
ZINC.				Do. f.o.b. Tyneor Tees			
In sheets	£20 5	0-20	10 0	Do. Nos. 3, 4, f.o.b. do.	2	6	2-7 0 0
Do. to arrive	20	10	0 20 0 0 <td>Railway chairs</td> <td>5</td> <td>10</td> <th>0-5 15 0</th>	Railway chairs	5	10	0-5 15 0
TIN.				Do. spikes			
English blocks	66	0	0 66 0 0	Indian Charcoal Pigs, <td>7</td> <td>0</td> <th>0-7 10 0</th>	7	0	0-7 10 0
Do., bars (in barrels)	57	0	0 57 0 0	in London, p. ton.			
Do., refined	98	0	0 98 0 0	STEEL.			
Barra Barra	97	0	0 97 0 0	Swed., in kegs (rolled)			
Straits	95	0	0 95 0 0	(hammered)	15	0	0-15 10 0
TIN-PLATES.*				Ditto, in fagots			
Per box.	£ s. d.	£ s. d.	Per ton.	English, spring	17	0	0-23 0 0
IC Charcoal, 1st qua.	1	5	6-1 8 6	QUICKSILVER (p. bottle)			
IX Ditto, 1st quality	1	11	6-1 14 6	Do.	6	17	0-—
IX Ditto, 2d quality	1	4	6-1 11 6	LEAD.			
IX Ditto, 2d quality	1	10	6-1 11 6	English Pig, com.			
IX Coke	1	1	6-1 2 0	Ditto, L.B.	19	0	0-19 10 0
IX Ditto	1	7	6-1 8 0	Ditto, W.B.	19	5	0-—
Canada plates, p. ton	18	0	0 18 0 0	Ditto, sheet	20	0	0-—
Ditto, at works	12	10	0 12 0 0	Ditto, red lead	21	0	0-—
At the works, 1s. to 1s. 6d. per box less.				Ditto, white	27	0	0-30 0 0

REMARKS.—The fluctuations that have taken place in our market are of trifling extent, notwithstanding there has been rather more animation this week than lately.

COPPER.—The demand has not been so good, and sellers in consequence have submitted to lower prices. The prospects of the market are not particularly encouraging. Yellow metal is to be bought at easy rates.

IRON.—The orders given out for rails have had the effect of imparting a firm tone to the market, and enabling ironmasters to command increased rates. Merchant bars continue to hold a good position, and buyers have to pay full prices. Some of the Staffordshire works are quoting 5s. per ton higher for bars, hoops, and nail rods, but this advance does not appear to be very freely paid. In Swedish bars there has not been quite so much doing, but prices have not in the least given way, and as the season for shipments from Sweden is now drawing to a close it is not improbable a gradual improvement may take place. Very little change is recorded in the value of Scotch pigs—a steady market for most part, with no greater variation in price than 3d. to 6d. per ton.

LEAD.—The demand for Russia, America, and China continuing good, sellers have succeeded in obtaining slightly enhanced rates; it is thought that the disturbances in Spain may in some measure interfere with supplies from that country, and should there be any serious falling off an important rise may be experienced.

SPELTER.—The stock in London is reduced to 894 tons, but this does not seem to help the market, as the demand remains inactive.

TIN.—The leading event of the week has been the sale of Banca at Rotterdam, which took place on Wednesday. The quantity brought forward consisted of 89,587 slabs, which realised 54½ fls., also 1421 slabs of Billiton, at 54 fls. The demand exceeded the supply 25 per cent., and orders had to be reduced accordingly. The buying was by no means evenly distributed, and, unlike most former occasions, there have been no lots offering since the sale at the price and terms of the sale. Many "bears," no doubt, have been caught, and will have to cover at a considerable loss. Prices of Banca and Straits are both rapidly advancing, and will maintain a more elevated position than hitherto. On "Change our market was very excited, and buyers were very anxious to secure tin. A little Straits had changed hands during the day at 94l., and afterwards 94l. 10s. was offered and refused, holders asking 96l., but it did not transpire that this was realised. The price of Banca since the sale has advanced to 56 fls., and the market closes with a strong upward tendency.

TIN-PLATES.—A slight reduction has been made in prices, and buyers experience less difficulty in placing orders at their limit.

STEEL.—A few sales have been effected in Swedish keg, and prices at present have undergone no actual change, although the market assumes an upward tendency.

QUICKSILVER.—No alteration to note in the quotations of this metal.

THE TIN TRADE.—Mr. L. Th. van Houten (Rotterdam, Sept. 28) writes—Our tin market opened very firm in the beginning of the month, but was thrown into a very unsettled state on the arrival of the East India mail, reporting the existence of a large stock of tin in the Island of Banca on March 31 of about 89,000 peculs. Several parties crediting this report, and nobody being able to give satisfactory explanation about it, lower prices were accepted by some holders, and a large business was also done for delivery ex next sale at declining prices. Subsequently official information, given by the Colonial Department, has shown that a large stock of tin always accumulated in Banca at that time of this year, kept back by great difficulties in shipping to Java during that period (the stock of tin in Banca on Jan. 31, 1867, being 83,000 peculs), and confidence was consequently very soon restored, buyers coming forward for large quantities, which again brought prices to their former level, holders mostly refusing to sell. In expectation of the result of the Trading Company's sale of the 30th inst. the figures, as we believe, fully justified, a better and brighter prospect for our tin market in future. The production of English tin for 1867 shows (see last week's *Mining Journal*) a great falling off with last year—8700 tons, against 9990 tons in 1866. The floating quantity of Banca tin now on the way to Holland is much smaller than was generally expected, it being now only 13,150 peculs, equal to 815 tons, whilst the actual export of Straits tin from Penang and Singapore to England and the Continent from Jan. 1 to July 31 this year is only 49,247 peculs, against 61,259 peculs same time last year. Banca tin was sold at 54 fls. in the beginning of the month, but upon the receipt of the news from Banca, referred to above, the price went down to 52½ fls., which was also accepted for some lots deliverable ex next sale. Confidence returning upon the explanation officially given by the Colonial Department, a good demand sprang up, and 54 fls. on the spot, and 53½ fls. deliverable ex next sale, was paid, large quantities of the latter changing hands, and there are still buyers to-day for both descriptions at these quotations. Billiton tin has followed the same course as Banca, and 52 fls. was accepted for parcella and 52½ fls. for tin on the spot; however, the market recovering again, 53 fls. and 53½ fls. respectively were again paid, at which prices there are still buyers. In the public sale of 5000 peculs Billiton tin, held in Batavia on Aug. 12, 54½ fls. per pecul was paid, equal to 52½ fls. ex ship here. The position of Banca tin in Holland on Sept. 28, according to the Official Returns of the Dutch Trading Company, show—

Import in September	Slabs	1868.	1867.	1866.
Total nine months	85,309	77,628	161,882	7,327
Deliveries in September	12,170	9,786	7,950	—
Total nine months	98,317	85,043	118,705	—
Stock second hand	65,892	187,996	193,259	—
Unsold stock	111,241	1,654	34,554	—
Total stock	177,133	189,650	233,813	—
Stock of Billiton	6,299	9,222	—	—
Import in September	4,300	—	—	—
Deliveries in September	4,550	—	—	—
Quotation (Banca)	54 fl.	53 fl.	46½ fl.	—
Sept. 28 (Billiton)	53½ fl.	53½ fl.	45½ fl.	—

These returns, compared with those of 1867, exhibit—An increase of the import for September of 325 tons, an increase of the import for the nine months of 238 tons, an increase of the deliveries for September of 74 tons, an increase of the deliveries for the nine months of 311 tons, a decrease of the stock second hand of 2785 tons, an increase of the unsold stock of 3397 tons, a decrease of the total stock of 568 tons, and a decline of the quotation of Banca of 17.138 per ton. The quantity of Banca tin now afloat for the Dutch Trading Company is 13,150 peculs,

equal to 815 tons, against 19,400 peculs, equal to 1215 tons, last year. The Government returns for the month of July are as follows—

EXPORT OF TIN FROM HOLLAND.		Seven months.	
1868.	1867.	1868.	1867.
Germany	181	152	1265
Belgium	134	59	939
England	16	3	329
France	55	102	124
Hamburg	14	15	160
United States	22	—	54
Other countries	11	22	190
Total	413	338	1661
Exports of Straits tin from Penang and Singapore to England and the Continent, from January 1 to July 31:—	1868.	1867.	
To England—Penang	12,432	12,432	34,432
—Singapore	1,464	—	28,893
To the Continent—Penang	—	—	—
—Singapore	1,464	—	921
Total	49,247	—	64,259

THE COPPER TRADE.—Messrs. Turnbull and Watson (Liverpool, Sept. 30) write—Copper (foreign): The improved demand (principally French) caused an advance in bars from 67l. to 68l. per ton on the spot, at which considerable sales were made; but as this demand has entirely ceased, and the English consumers do not seem inclined to pay the advance, the business in the latter part of the fortnight has been very limited. In Chilian refined ingots, a large business has been done; those of the Cousino brand have been sold as low as 69l. to arrive, and 69l. 5s. to 69l. 10s. on the spot, owing to their irregular quality compared with Urmenita, which has realised about 70l. to 71l., and in one instance for a parcel at Swansea of especially good quality, 72l. per ton. The total business comprises about 620 tons of bars, spot and to arrive, at 67l. to 68l.; about 885 tons ingots at 69l. to 72l.; a cargo of Chilian ore and regulus, by tender here, at 13s. 9½d., and one, to arrive at Swansea, at 13s. 10d. per unit. Some small transactions at 78l. 10s. for Wallaroo, and 79l. 10s. for Barra Barra. Arrivals from the West Coast South America during the past fortnight:—Cape Horn, at Valparaiso, 5 tons ores, 14 tons regulus, 75 tons bars; Delmira, ditto, 60 tons bars. At Swansea—Cornwall, 620 tons regulus, 136 tons ingots; Rosetta, 625 tons regulus. Sales since our last have been:—

MINE OR SHIP.		Tons.		Price.	
Bars—Cotopaxi	113	67	10	Ing.—Lota	50
Ing.—Lota	235	69	0	Ing.—Urmenita	50
Bars—Urmenita	150	67	0	Ing.—Urmenita	50
Bars—Salado and Thos. Blythe	46	68	0	Ing.—Lota	50
Bars—Medora	20	68	0	Ing.—Urmenita	50
Bars—Lota	50	67	10	Ing.—Urmenita	50
Bars—Banco & Urmen	50	68	0	Ing.—Chilian	650
Bars—Lota	74	68	0	Ore—Canadian	215
Bars—Serena	30	68	0	Ing.—Urmenita	100
Ing.—Lota	70	69	0	Chilian ore & reg.	650
Ing.—Lota	100	69	10		

Stocks of copper produce (Chilian and Bolivian) in first and second hands:—
Ores. Regulus. Bars. Ingots. Barilla.
Liverpool 1644 685 4678 1025 403
Swansea 1947 1554 4609 85 514
Total 3591 2239 6138 1110 517

Messrs. Vivian, Younger, and Bond (Oct. 2) write—This week shows quite a dearth of business as regards Chilian produce, not a single transaction in either bars, ores, or regulus reported. Buyers seem satisfied for the present, and, in the absence of real business, importers do not care to name the prices at which they might sell. Nominally, however, the market is a shade lower than last week. Nevertheless, quite moderate buying would doubtless in the present state of things cause previous prices to be quickly reached. English and fine foreign copper have been very quiet. Wallaroo has again fetched 78l. 10s.

The settlement of the fortnightly account took place on the MINING SHARE MARKET on Wednesday, and was heavy in one or two stocks, but the market for cash and next account has not been particularly active since our last, and the chief business confined to Prince of Wales, East Grenville, Marke Valley, East Caradon, Chiverton Moor, Chontales, Yudanamatana, West Chiverton, West Seton, Wheal Seton, and a few others. The standard for copper ores advanced on Thursday 17, 2s. per ton, and the half-yearly sale of Banca tin, which took place in Holland on Wednesday, seems to have given general dissatisfaction. The whole stock offered was sold at 54½ fls., and it is hoped that prices will now improve in Cornwall.

Marke Valley, 7½ to 7¾; in our last there was a clerical error in the quotation, which should have been 7½ to 7¾, instead of 6½ to 6¾, as sent us through the Mining Exchange List. Prince of Wales shares have been largely dealt in, and leave off 41s. to 43s.; the 65 east is now worth 20l. per fathom; the 65 west, 25l. per fathom; the winze below the 55 is worth 15l. per fathom; and the new south lode, 15l. per fathom. We understand the agent for the Duchy of Cornwall inspected the mine on Sept. 30, and values the 65 east at 32l. per fathom, and the 65 west at 25l. per fathom. West Chiverton, 60l. to 61l.; Bedford Consols, 12s. 6d. to 15s.; Bedford United, 32s. 6d. to 35s.; Chiverton Moor, 6½ to 6¾. East Basset, 8 to 10; at the meeting, held on Sept. 29, the accounts showed a balance against the company of 330l. 8s. 7d., but no call was made. The loss on two months was 320l. 19s. 10d. In the 130 fm. level 8 fathoms have been driven south towards the lode, and as the water is increasing the agents hope soon to cut a good lode for copper. East Grenville, 2½ to 2¾; the lode in the 110 east is 12 to 15 in. wide, worth 1½ ton per fathom. Wheal Grenville, 20s. to 25s.; the 66 west has improved to 2 feet wide, worth for tin 20l. per fathom. Caldbeck Fells, 7s. 6d. to 12s. 6d.; Glan Alun, 12s. 6d. to 13s. 6d.

Great Laxey, 17½ to 18; the accounts published preparatory to the annual general meeting, to be held at Douglas on the 14th inst., show sales of lead from Jan. 3 to Aug. 7, 1868, of 1800 tons, realising 29,377l. 10s.; blende, 7326l. 9s. 9d.; copper, 10687l. 15s.; total, 37,732l. 14s. 9d. (less 6697l. 6s. credited last account). The stock of ore on hand is valued at 9365l. The labour cost paid amounted to 16,947l. 18s.; bills, 2980l. 13s. 4d.; royalty, 2298l. 9s. 4d.; and dividends (17th and 18th), 15,000l.; which, after other several payments, leaves a balance in hand of 10,455l. 5s. 4d. The statement of assets and liabilities shows a balance of assets of 27,176l. 14s. 2d. Chontales, 2½ to 2¾; Devon Great Consols 375 to 400; Drake Walls, 7s. 6d. to 10s.; East Caradon, 3 to 3½; East Lovell, 6½ to 7; Frank Mills, 40s. to 45s.; Frontino and Bolivia, 13s. to 14s.; Great Retalack, 3 to 3½; Great Wheal Vor, 11 to 12, ex div.; Herodsfoot, 40 to 42½; New Lovell, ¾ to ¾; South Herodsfoot, 17s. 6d. to 22s. 6d.; Don Pedro, 3 to 3½; Yudanamatana, 2½ to 3½; North Treskerby, 5s. to 7s. 6d.; Providence Mines, 22 to 24; Tincroft, 12½ to 13½; West Caradon, 2 to 3; West Drake Walls, 7s. 6d. to 10s.; West Seton, 15½ to 15¾; Wheal Basset, 65 to 70; Wheal Kitty (St. Agnes), 2½ to 3; Wheal Seton, 45 to 50; Wheal Trelawny, 8 to 9. Wheal Chiverton shares have undergone as great fluctuations this week as they did last, for, declining suddenly from 3 to 1½ sellers, they rose again on Friday, and left off 2½ to 2¾. A Wheal Uny meeting, this day (Friday) the returns for the quarter gave a profit of 271l. 5s. 11d., and the balance in favour of the mine was 382l. 6s. 9d. The 140 east is reported worth 40l. per fm., in the rise 40l., and the reserves of tin greatly increasing.

The Market for Mine Shares on the Stock Exchange during the week has been quiet; prices have, however, been fairly maintained. There has been a steady demand for Don Pedro, at 2½ to 2¾ prem.; Yudanamatana are firm, at 2½ to 3½; Pestarena shares enquired for, at 1½ to 1½; Del Rey shares are steady, at 19 to 19½; Anglo-Brazilian, par to 1; Chontales shares have been dealt in to some extent, at 2½ to 2¾; Rossa Grande maintain their premium of 3-16 to 5-16; Frontino are better, being last quoted at ¾ to ¾; United Mexican, 1½ to 2½; Port Phillip, 1½ to 1½. British Mines have been dealt in to a moderate extent. Great Laxey shares are very firm, at 17½ to 18, ex div.; West Chiverton, 60l. to 61l.; Chiverton, 2½ to 2¾, after many fluctuations; Chiverton Moor, 6½ to 6¾. Prince of Wales, 41s. to 43s.; a great improvement has taken place in the 65, or bottom level, and the mine generally is looking well. At Great Rhosmor, the lode in the shaft sinking below the 70 fm. level has improved; they have 55 tons of lead for sale for the month. Glan Alun, 12s. 6d. to 13s. 6d., and improving.

IRISH MINE SHARE MARKET.—The demand for mining shares has resumed a much better tone, in consequence of the satisfaction afforded by the Killaloe Slate Quarry Company, and the directors' report on the Wicklow Copper Mines, which they have issued preparatory to the company's next half-yearly general meeting, to be held on the 24th instant, and recommends the declaration of a dividend of 5s. per share, or at the rate of 20 per cent. per annum, the payment of which will leave a balance of 400l. over, to the credit of the present half-year. This statement, which is much better than had been expected for some time, on account of the unfavourable state of the

in the price of shares, which closed at, but hardly sustaining, 12½. 2s. 6d. per share (2½. 10s. paid), and they range now from 12½. 10s. buyers, 12½. 12s. 6d. sellers, for cash. But the demand is not great at even the lower quotation. Mining Company of Ireland shares derived some benefit from the improvements in the other mining shares, and have advanced from 15½. 2s. 6d., last week's closing price, to 15½. 5s., and are much wanted at that figure. There are, however, several offers to sell at 15½. 10s. (7½. paid). Connors shares have not been taken for the last few days at the previous quotation of 4s. 6d. per share, but there are enquiries for them at 4s. 3d. Killaloe Slate Quarry shares continue firm, at 18s. 6d., ex dividend. Cape Copper shares commanded 12½. 5s., but are not much dealt in.

The directors' and agent's reports on the Killaloe Slate Quarries, on the left bank of the Shannon, county Tipperary, have not yet resumed the importance which they commanded some 25 years ago, when the quarries were worked by an English proprietary, under the title of the Imperial Slate Company, and when more than 700 men and boys found lucrative employment there, and about 10,000 tons of slate per annum were returned. But an old-fashioned and improvident system of working of late years has imposed much labour and loss of time to remove debris from off some of the best parts of the slate vein, which when accomplished, with the necessary perseverance and engineering skill, will, undoubtedly, re-open a vast field for further profitable employment of the fine and industrious race of people of that neighbourhood, and handsomely reward the present owners. Much credit is due to them that in the comparatively short time they have been at work they have succeeded in removing so much of the ill-effects of former mismanagement, and bringing the quarries again into a profitable state of working; and there can be no doubt that if they persevere with the same energy which they have hitherto brought to bear on the property it will prove one of the most successful enterprises of the kind in Ireland. By the directors' report, it appears that the last half-year's total receipts for slates and increase of stock amount to 4794½. 16s. 11d., against a total expenditure of 3882½. 4s. (including interest on borrowed capital), leaving a net surplus of 912½. 12s. 11d. This amount would have enabled the company to declare a dividend of 10 per cent., and to carry 100% to the credit of the current half-year. But the directors, in the face of the amount due to the company's bankers, considered it more prudent to recommend the payment of a dividend of 6 per cent. only, which the shareholders have adopted. In the gross receipts during the past six months there is an increase over the corresponding period of last half-year from 3988½. 4s. to 4794½. 16s. 11d., while in the expenditure there is an increase only of 272½. 0s. from 3610½. 4s. to 3882½. 4s. At the same time, great progress has been made in more effectually laying open the quarries for future working, by the removal of large quantities of waste, and by further clearing the unproductive overburden. Besides this, the machinery at present necessary is in excellent condition and efficiency, comprising two steam-engines, dressing and hoisting machinery, &c., so as to render the prospects of future good results from the quarries most satisfactory.

During the quarter ending Sept. 30 the quantity of copper ore, the produce of Cornwall and Devonshire, sold at the Cornish Ticketing, was 28,414 tons, which contained 1852 tons 9 cwt. of fine copper, and realised 113,064½. 3s. 6d., being equal to an average of 37. 19s. 6d. per ton of ore, and 61½. 1s. per ton of copper in the ore. During the same period the British, colonial, and foreign ores sold at Swansea amounted to 11,572 tons, which contained 1477 tons 11 cwt. of fine copper, and realised 100,875½. 7s. 6d., being equal to an average of 9½. 10s. 6d. per ton of ore, and 68½. 5s. 6d. per ton of copper in the ore. The average produce of the ore sold at the Cornish Ticketings was 6½. per cent., whilst that sold at Swansea gave an average produce of 12½. per cent. From this it will be seen that the aggregate sales by ticket were 39,986 tons of ore, containing 3330 tons of fine copper, and realising 213,939½. 11s. The subjoined is a summary of the periodical sales at the Cornwall and Swansea Ticketings respectively:—

The ores sold at the Cornwall Ticketings were—									
Date.	Stand.	Prod.	Per ton.	Per unit.	Tons.	Fine cop.	Amount.		
July 2.	£109 5	.. 6½.	£3 19 0	.. 12s. 10½d.	1667	.. 102 4	£ 6,679 6 0		
" 9.	108 1	.. 6½.	3 13 0	.. 12 4	1482	.. 87 14	5,799 13 6		
" 23.	104 6	.. 6½.	3 19 6	.. 12 4	3488	.. 224 15	18,866 3 0		
" 30.	97 15	.. 7½.	4 10 0	.. 12 1½	2413	.. 179 1	10,865 0 6		
Aug. 6.	102 15	.. 6½.	3 13 6	.. 11 9	3093	.. 193 5	11,349 13 0		
" 13.	105 14	.. 5½.	3 9 6	.. 11 9	2318	.. 136 8	8,042 5 6		
" 20.	105 3	.. 6½.	4 0 0	.. 12 5½	3754	.. 241 6	15,044 1 6		
" 27.	97 9	.. 7½.	4 18 0	.. 12 5½	1622	.. 127 2	7,926 8 0		
Sept. 3.	103 5	.. 6½.	4 2 6	.. 12 4½	1669	.. 111 3	6,888 13 0		
" 10.	104 19	.. 5½.	3 4 0	.. 11 3½	1155	.. 65 8	3,687 3 0		
" 17.	104 19	.. 6½.	3 18 0	.. 12 4	3522	.. 223 7	13,750 0 6		
" 21.	98 7	.. 7½.	4 6 6	.. 12 0	2256	.. 160 16	9,665 16 0		
Total for the quarter.	28,414	.. 1852	.. £113,064 3 6						
Quarter ending June, 1868	31,644	.. 2026	.. 9	.. 141,281 0 6					
Quarter ending March, 1868	29,781	.. 1942	.. 4	.. 133,390 19 6					
Quarter ending December, 1867	30,981	.. 2068	.. 3	.. 142,140 6 6					
Total for the year.	120,820	.. 7879	.. 5	.. £629,876 10 0					
Showing a quarterly average of	30,205	.. 1969	.. 15	.. 132,469 2 6					
Corresponding quarter, Sept., 1867	20,410	.. 2008	.. 14	.. 137,216 9 6					

The ores sold at the Swansea Ticketings were—									
Date.	Stand.	Prod.	Per ton.	Per unit.	Tons.	Fine cop.	Amount.		
July 14.	£91 4	.. 6½.	£11 10 0	.. 13s. 10½d.	2802	.. 476 7	£33,042 16 6		
" 21.	89 17	.. 10½.	7 3 0	.. 13 2½	1340	.. 145 14	9,620 12 0		
Aug. 11.	89 0	.. 10½.	6 12 0	.. 13 0	1886	.. 190 10	12,447 19 0		
Sept. 1.	92 4	.. 13½.	9 5 8	.. 13 10½	2802	.. 352 16	26,573 13 0		
" 22.	90 6	.. 16½.	11 8 2	.. 13 7½	1682	.. 281 15	19,190 7 0		
Total for the quarter.	10,572	.. 1477	.. 11	.. £100,875 7 6					
Quarter ending June, 1868	12,307	.. 1883	.. 3	.. 141,023 10 6					
Quarter ending March, 1868	5,127	.. 869	.. 1	.. 61,906 3 6					
Quarter ending December, 1867	10,532	.. 2083	.. 9	.. 148,827 12 6					
Total for the year.	38,628	.. 6913	.. 4	.. £452,632 14 6					
Showing a quarterly average of	9,657	.. 1578	.. 6	.. 113,158 3 6					
Corresponding quarter, Sept., 1867	8,881	.. 1202	.. 0	.. 86,033 8 6					

At Redruth Ticketing, on Thursday, 2535 tons of ore were sold, realising 9239½. 6s. 6d. The particulars of the sale were:—Average standard, 103½. 2s.; average produce, 6½.; average price per ton, 37. 13s.; quantity of fine copper, 157 tons 4 cwt. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Sept. 3.	1669	.. £103 5 0	.. 7½.	.. £4 2 6	.. 12s. 4½d.	.. £61 18 6
" 10.	1155	.. 104 19 0	.. 5½.	.. 3 4 0	.. 11 3½	.. 56 7 6
" 17.	3522	.. 104 19 0	.. 6½.	.. 3 18 0	.. 12 4	.. 61 11 0
" 24.	2236	.. 98 7 0	.. 7½.	.. 4 6 6	.. 12 0	.. 60 20 0
Oct. 1.	2535	.. 103 2 0	.. 6½.	.. 3 13 0	.. 11 9	.. 58 15 0

Compared with last week's sale, the advance has been in the standard 1½. 2s., and in the price per ton of ore about 1s. 6d. Compared with the corresponding sale of last month, the decline has been in the standard 1½., and in the price per ton of ore about 1s. 3d.

The following dividends were declared during September:—			
Mine.	Per share.	Amount.	
Great Laxey	£0 10 0	.. £ 7,500 0 0	
Devon Great Consols	6 0 0	.. 6,144 0 0	
South Caradon	5 0 0	.. 2,500 0 0	
Great Wheal Vor	0 7 6	.. 2,215 10 0	
Tincroft	0 5 0	.. 1,500 0 0	
Foxdale	0 10 0	.. 1,400 0 0	
East Pool	7 10 0	.. 960 0 0	
Wheal Mary Ann	0 17 6	.. 896 0 0	
Providence	0 10 0	.. 560 0 0	
South Crofty	0 10 0	.. 468 10 0	
Don Pedro North del Rey	0 3 0	.. 11,424 6 0	
Alamillos	0 2 0	.. 3,500 0 0	
Fortuna	0 2 6	.. 3,125 0 0	
Linares	0 3 4	.. 2,500 0 0	
Total		£44,753 6 0	

The EAST PLYNIMMON LEAD MINING COMPANY, with a capital of 7000£, in shares of 20£ each, has been formed for developing the Blaengwe grant, which adjoins the celebrated Plynlimmon Mine, and is on the same lodes. The adit level at Plynlimmon has been driven 110 fathoms in a lode averaging for the whole of that distance 1 ton of lead ore per fathom, the present end of the level being worth

3 tons per fathom, and is now within 90 fathoms of East Plynlimmon boundary. In East Plynlimmon grant a valuable mine can be laid open cheaply and expeditiously. Another important fact is that the Plynlimmon lode has been discovered at the eastern boundary of the East Plynlimmon grant (on the opposite side from Plynlimmon Mine), where it shows good lead ore, and is of excellent character, and from this point an adit can be driven westward on the course of the lode and quickly gain 40 fathoms of back; this discovery is most important. The prospectus will be found in another column of this day's Journal.

The DUKE OF EDINBURGH MINING COMPANY has been constituted on the Cost-book System, with 6000 shares of 5s. each, one-half of which are retained by the present proprietors in consideration of upwards of 7000£. expended by them upon the available works, the remainder being offered to the public to provide working capital for further extending the works, as proposed in the manager's report. The whole amount thus raised (less 36½. 2s. 6d., which includes duchy fees and all costs up to the end of August, and represents the only liability against the company) will be entirely devoted to developing the undertaking, and called up as required, in sums not exceeding 6d. per share. The property to be worked is situated in Calstock, and is surrounded by several mines which have paid good dividends, and others which have yielded large returns. The facilities both for cheap and expeditious development are unusually great, and the indications of abundant deposits of copper all that can be desired. The mine has been inspected by Messrs. H. Rickard, H. James, and J. Goldsworthy, and their reports are most encouraging. Several promising lodes have already been laid open—one worthy of particular attention. An engine-shaft has been sunk 20 fms. and well timbered, and at 15 fms. from surface a cross-cut has been put out north about 3½ fms., and intersected the lode, which is fully 6 ft. wide, with a south underlay of about 8 in. in a fathom, composed principally of gossan of the finest description, with spots of black copper ore, holding out every characteristic of making a good and productive lode at an early period. It is recommended to sink the engine-shaft to a 40 fathom level, and then drive upon the lode, when a good course of ore may be anticipated. The pursership of the mine has been placed in the hands of Mr. Thomas Grenfell, and Messrs. W. B. and C. F. Collopy, of Calstock, are appointed the managers.

At South Caradon Mine meeting, on Tuesday, the accounts for May and June showed a profit of 2879½. 4s. 6d. A dividend of 2500£. (5s. per share) was declared; and 2188½. 17s. 8d. carried to credit of next account. Mr. Peter Clymo reported that "the mine is still looking well, and although, in consequence of the low state of the standard, we have thought it advisable to reduce our dividend, yet there is every reason for feeling assured we have a profitable and lasting mine."

At South Wheal Crofty Mine meeting, on Monday, the accounts for four months ending August showed a profit of 483½. 2s. 9d. A dividend of 468½. 10s. (10s. per share) was declared; and 331½. 8s. 5d. carried to credit of next account. Mr. Edward Hearle Rodd, the pursuer says—"I can make no promise as to future dividends; every economy consistent with the efficient and liberal development of the mine will continue to receive the attention of myself and the agents. From various sources of reliable information which I have received, I consider the copper market, as regards Cornish adventures, to be precarious, but the reports in the papers are very fluctuating, and perhaps the safe course for a pursuer to adopt under such circumstances is to make no promises, especially as the returns of ore are not so favourable at the present time as at the last meeting of the adventurers."

At Foxdale Mines (Isle of Man) meeting, on Sept. 26, the directors declared a dividend of 10s. per share.

At the Providence Mine meeting, on Wednesday, the accounts showed a credit balance of 950½. 8s. 9d. The profit on the three months amounted to 601½. 7d. A dividend of 560½. (10s. per share) was declared, leaving a balance of 390½. 8s. 9d. to be carried forward to the credit of the next account. The report stated that, on the whole, the mine continues to look well.

At the East Rosewarne Mine meeting, on Wednesday (Mr. Sims in the chair), the accounts showed a debit balance of 351½. 15s. 6d. A call of 2s. per share was made. The Chairman thought the financial position of the mine was quite as satisfactory as could have been fairly expected, considering the monthly returns, and the low price of copper. The report of the agents appears in another column.

At the Wheal Uny meeting, yesterday (Mr. McCallan in the chair), the accounts showed a credit balance of 382½. 6s. 9d. The profit for the three months amounted to 271½. 15s. 11d. Details in another column.

At the Minera Union Mine meeting, held at the Wynnstay Arms, Wrexham, on Sept. 25 (Mr. William Low in the chair), the accounts for the two months ending July showed a debit balance of 452½. 12s. 8d. A call of 2s. 6d. per share was made on the new shares, and a resolution was passed authorising the directors to exercise the borrowing powers under the company's articles to the extent of 1000£. It was explained that there was about 600£. and 700£. worth of ore broken and at surface, which could not be dressed for the want of water, but that difficulty had now been removed. The Chairman moved that the report and accounts be received and adopted. The resolution having been duly seconded, Mr. W. Ward (of London) strongly urged that a cross-cut should be put out between Brabner's and Low's shafts, and also between Low's and the Lower Ristododd Mine, which is to the south. The report of Mr. W. T. Harris stated that the returns at present are from 12 to 15 tons of lead per month, but when Low's shaft is further developed he has no doubt this quantity will be considerably increased. The several points of operation are prosecuted with economy and despatch, and there is every reasonable encouragement to expect when thoroughly carried out, together with those recommended, a good and profitable mine will yet be the result. Messrs. Mercer, Knowles, and Pugh, the retiring directors, were re-elected.

At Spearne Consols Mine meeting, on Sept. 22, the accounts showed a debit balance of 89½. 9s. The report of the agent stated that there were twelve tickets working on tribute, varying from 12s. to 18s. in 1½. 90 persons were employed in the mine.

A telegram was received yesterday afternoon from the agent of East Wheal Grenville, saying a branch had just been intersected in the 55 fms. level cross-cut, worth 1½. ton of copper ore per fathom. This is not the lode, which is still a head.

The Bank of England return for the week ending on Wednesday evening showed, in the ISSUE DEPARTMENT, an increase in the "notes issued" of 129,245£., which is represented by a corresponding increase in the "coin and bullion" on the other side of the account. In the BANKING DEPARTMENT there is shown a decrease in "other deposits" of 465,062£., and in the "rest" of 8458£., together 473,521£.; and increase in the "public deposits" of 197,457£., and in the "seven day and other bills" of 16,432£.; together, 266,889£.=266,832£. On the asset side of the account there is an increase in the "Government securities" of 150,000£., and in the "other securities" of 367,997£.=517,997£., showing a total decrease in the reserve of 784,629£.

COAL MARKET.—The fresh arrivals this week number 114 ships. The colder weather produced an active demand for house coals, and a large business was done at an advance of 3d. to 6d. per ton on last week's quotations. Hartley's in steady request, and advanced 3d. Hetton Wallsend, 19s. 6d.; Hartlepool Wallsend, 17s. 9d.; Tees Wallsend, 18s. 9d.; Gosforth Wallsend, 16s.; Kelloe Wallsend, 16s. 9d.; South Hartlepool, 16s. 9d.; New Belmont Wallsend, 16s.; Trimdon Grange Wallsend, 15s. 6d. Unsold, 7 cargoes: 15 at sea.

WANTED, a good secondhand high-pressure STEAM ENGINE for winding purposes, cylinder 24 to 30 in. diameter, stroke 4 ft. 6 in. to 5 ft., with drum for round wire ropes, brake, and all fittings; also one cylindrical egg-ended BOILER, 30 ft. by 3 ft. 6 in., with all fittings and mountings complete; TWO PULLEYS for 1½. round ropes, 12 ft. diameter, with pedestals, brasses, &c., complete; also any useful COLLIERY MATERIALS. The whole machinery, although secondhand, must be comparatively new, and in a good solid working condition.

Particulars, stating LOWEST CASH PRICE, delivered at the Buckley Station of the Wrexham, Mold, and Conrath's Quay Railway, to be addressed to Mr. SAMUEL P. WARD, 125, Finsbury, London; and to Mr. T. J. COTTINGHAM, M.R.E., Mold, Flintshire; from the latter of whom all details can be obtained.

WANTED, a SECONDHAND DIRECT-ACTION WINDING ENGINE, or PAIR, of about 125-horse power, of modern construction, and in good condition. Apply, with price and particulars, to Mr. JOHN MILLWARD, Civil and Mechanical Engineer, 27, Paradise-street, Birmingham.

FOR SALE (a bargain), A CORNISH PUMPING ENGINE of 240-horse power, in good condition. Applications to be addressed to "H. J. R.," MINING JOURNAL Office, 26, Fleet-street, E.C.

FOR SALE, THIRTY TONS OF NEW RAILS, of FLANGE SECTION, 40 lbs. per yard, with patent wrought-iron chairs and fish-plates. Apply to Mr. ROBERT WRIGHTSON, Newport, Monmouthshire.

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For particulars, and terms of the proposed lease, apply in the first place to HENRY BECKETT, F.G.S., Consulting Mining Engineer, Wolverhampton. Permission to inspect, and local information, can be obtained from the Estate Agent, GREGORY BURNETT, Esq., Doe Cottage, Queen's Ferry, Flint. None but Principals need apply.

IRON ORE INVESTMENT TO BE DISPOSED OF.—TO BE DISPOSED OF, BY PRIVATE TREATY, either in part or the whole, VALUABLE IRON ORE WORKS, having large deposits of ore recently developed, in the MINERAL DISTRICT near WHITEHAVEN. Address, "A. B.," Post Office, Whitehaven.

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THE FORTUNA COMPANY (LIMITED).—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the shareholders in this company will be HELD at this office on THURSDAY, the 8th October next, at Two o'clock P.M., to receive the accounts, balance-sheet, and reports of the directors and auditors for the half-year ending 30th June last. By order of the Board, H. SWAFFIELD, Secretary.

5, Queen-street-place, Upper Thames-street, London, Sept. 29, 1868.

THE LINARES LEAD MINING COMPANY (LIMITED).—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the shareholders in this company will be HELD at this office, on THURSDAY, the 8th October next, at half-past Twelve o'clock P.M., to receive the accounts, balance-sheet, and reports of the directors and auditors for the half-year ending 30th June last. By order of the Board, H. SWAFFIELD, Secretary.

5, Queen-street-place, Upper Thames-street, London, Sept. 29, 1868.

THE ALAMILLOS COMPANY (LIMITED).—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the shareholders in this company will be HELD at this office, on THURSDAY, the 8th October next, at a quarter past One o'clock P.M., to receive the accounts, balance-sheet, and reports of the directors and auditors for the half-year ending 30th June last. By order of the Board, H. SWAFFIELD, Secretary.

5, Queen-street-place, Upper Thames-street, London, Sept. 29, 1868.

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 25	Great Laxey	109	£22 11 6	Stock and Co.
	Bwlch Consols	36	13 6 6	Walker, Parker, & Co.
	Swadlow Consols	25	11 8 6	ditto
	Cargill	70	17 15 0	ditto
29	Brynpostig	25	11 0 0	Sims, Williams, &

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THESE SIGNALS supply a want long felt in giving INSTANT COMMUNICATION in MINES at SEVERAL PLACES at the SAME TIME without the aid of electricity, but by a single rod or chain; so that a degree of safety is ensured hitherto unknown.

The price is also very low, and the mechanism so simple that any ordinary mechanic could put it in order if out of adjustment.

The same patent, as applied to ships, has received the approval of the Chief Engineer, Chatham Dockyard (vide Times, Aug. 13, 1868).

SOLE AGENT FOR MINERS:

MR. GEORGE B. JERRAM, ENGINEER, 2, GREAT QUEEN STREET, WESTMINSTER.

N.B.—Mr. JERRAM is now visiting the different mines with working models.

Notices to Correspondents.

•• Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

GREAT CHIVERTON CONSOLS.—Can any of your correspondents, shareholders or otherwise, give any information respecting this mine? What is now doing and likely to be done, and what prospect investors have for their 27. 10s. per share paid, will be welcome information to—AN ADVENTURER.

SCALE FOR ADVERTISEMENTS.—To avoid the necessity of frequent application, we may state our charge for general advertisements is—for six lines and under, 4s.; per line afterwards, 8d. Average, twelve words per line.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, OCTOBER 3, 1868.

OUR COAL AND IRON TRADES.

The Mineral Statistics for 1867 contain a vast amount of most valuable information, and when taken in conjunction with those of former years point out the progress made in the development of those important branches of our national industry. Thus from year to year we are enabled to see whether our coal, iron, and mineral trades generally have been active or otherwise, and through them trace the condition of most other branches of business, seeing that on the former the success or otherwise of so many others depend. Looking, therefore, at the statistics relating to the coal trade, it may be stated that the increase during 1867 has been considerably less than in former years. In 1864 the increase over the previous year was 4,495,358 tons; in 1865 it was 5,127,145 tons; whilst in 1866 it had fallen to 3,497,956 tons; and last year the decrease was still greater, being only 2,869,936 tons. Looking at the various coal-producing districts, it is rather singular to find that many of those which were formerly noted for their large yearly increase have shown a considerable falling off, whilst others of less importance have shown a marked increase. Singularly enough, the most extensive of our coal fields, and which heads the list as producing the largest quantity of coal in the kingdom, shows the greatest falling off during the year. Thus, although Durham and Northumberland last year raised no less than 24,867,444 tons, yet that was less by 327,106 tons than was raised during 1866. On the other hand, the comparatively small district of Shropshire shows what may be termed extraordinary results, for whilst it is only credited with 1,220,700 tons for 1866, yet last year it increased its output to 1,558,500 tons, or equal to over 20 per cent. In Derbyshire, which is destined to become one of the principal seats of the coal trade, and where just now there are more large collieries being opened out than in almost any other county in England, there has been a considerable falling off. This, however, was not owing to a shortness of trade, or deficient demand, but to the strike which, in the first instance, existed at the extensive collieries at Staveley and Clay Cross for the first three months of the year, and afterwards in the Burton-on-Trent district for a long time after the former had been settled. Future years will show a very different result so far as Derbyshire is concerned. Leicestershire, another of those comparatively unimportant districts which hitherto have made but little progress, now shows in advance of most others, and whilst in 1866 it only raised 866,560 tons, last year it sent out no less than 1,150,000 tons, being an increase of 283,440 tons, equal to 32 per cent., a rise which may be termed really extraordinary. One of the smallest producing counties is Warwickshire, and it also shows that it is not falling behind its neighbour, for it exhibits an increase on the year of 13 per cent. on 880,850 tons. In Gloucester and Somerset, where the yield has been under two millions, the yield for the year has been in excess of 1866 by nearly 7 per cent. In South Wales the tonnage raised last year shows a considerable falling off when compared with the previous one, the returns giving 9,092,300 tons for 1867, against 9,376,445 tons for 1866, or a loss in the year of 284,145 tons. On the other hand, in North Wales, where the production is of a very limited character, there has been a considerable increase, the quantity for last year, as shown by the statistics, being 2,371,250 tons, against 2,082,600 tons for 1866, an excess of 288,650 tons.

Amongst the large coal-producing districts, those of Scotland appear to advantage, the total quantity raised for the past year being 14,125,943 tons, against 12,625,000 for the previous one, an increase of no less than 1,500,943 tons. The very small tonnage of coal raised in Ireland—125,000 tons—shows an excess over the year of 1250 tons only. Looking at the extensive development of several new districts in Nottingham—where some new seams of coal have just been discovered—Leicester, and other places, future years will show great changes with regard to the production of coal, and although it may

be that some of the oldest districts may gradually fall off, so far as regards production, yet it is evident that others are starting into existence, which will be capable of supplying their deficiency, and more. Turning to the production of iron ore and iron for the year, some very important and even startling facts are to be gleaned by comparison with former periods. In one instance in particular the change is of such an extraordinary character as to be almost beyond belief, were it not for the very reliable character of the statistics. Thus we find that in 1866 Monmouthshire raised only 60 tons of ore, of the value of 15s., whilst last year it is credited with 311,057 tons, of the value of 86,040l. 10s. This is a rise which, if correct, far surpasses anything in the mineral history of the kingdom which we can recollect. The next greatest increase has taken place in the West Riding, being no less than 22,000 tons for the year; whilst the North Riding, on the other hand, shows a falling off of 70,022 tons; whilst North Staffordshire has increased its production to the extent of more than 13 per cent. The southern division shows a decrease to about the same amount. The largest decrease on the year, however, is to be found with regard to Scotland, where the quantity raised in 1867 was only 1,264,800 tons, against 1,587,000 tons for the previous year, the decrease being 322,200 tons. Matters have been better in South Wales, where the tonnage raised has in excess of that of 1866 by 132,494, but in the northern part of the Principality there was a decline to the extent of 12,600 tons. Herefordshire and Oxfordshire, in which small quantities of ore were formerly obtained, appear to have dropped out altogether, as there are no returns from them. The total yield for last year shows an increase of 356,046 tons.

There has been during the past year an increase in the quantity of pig-iron made of 237,126 tons, to which Durham has very largely contributed, the tonnage being 477,884 tons for 1867, against 298,867 tons for 1866, the excess being 179,017 tons, considerably more than 55 per cent. The North Riding of Yorkshire also contrasts favourably with the other iron-making districts of the country, showing a yield of no less than 94,801 tons in favour of the year; next to which stands Lancashire, with a balance in its favour, over 1866, of upwards of 50,000 tons. Northamptonshire, as one of the growing districts, and in which the iron trade may be said to be in its infancy, shows an increase during the year of 6010 tons; and Lincolnshire, which may be included in the same category, has also improved during the year to the extent of 11,816 tons. On the other side there has been a decrease in the following counties:—Cumberland, 26,506 tons; Derbyshire, 39,839 tons; Northumberland, 19,429 tons; North and South Staffordshire, 25,000 tons; and the West Riding of Yorkshire, 10,745 tons. Wales shows a decrease of no less than 33,892 tons, but which is more than counterbalanced by the excess output of Scotland, which was 37,000 tons. Looking at the year 1867, although the increase has not been very large, still the make of pig-iron cannot be looked upon as in any way unsatisfactory.

STEAM-BOILERS AT IRON WORKS.

We are sure that we cannot be doing a greater service to the ironmasters of this country than by continuing to remark upon the importance of their boilers being placed under independent inspection. It was only a month ago that we had occasion to advert to the subject, because of the painful accident that had occurred at the Mersey Steel and Iron Works. During the past week there has occurred another catastrophe of the same class, and, unhappily, of a yet more disastrous character. On this occasion 11 men and boys have been killed, and there is reason to fear that at least some three or four others will yet expire. The accident occurred at the Moxley Steel and Iron Works, belonging to Mr. THOMAS WELLS, whose place of business is between Wednesbury and Bilston, in South Staffordshire. We have examined the boiler, and the evidences seem to us to be those which might be expected to be observed in a boiler originally good, but which, after 14 years constant wear and frequent repairs, could hardly be worked with safety at a pressure equal to that which was set down for it when it was new, especially if the pressure—in this case 34 lbs.—was quite as much as it should have been made to carry. The fierce flames of four furnace fires supplied it with heat. Such intense action soon burnt away the bottom plates. These were three times renewed, and then the substituted and the adjoining plates patched with tolerable frequency. By every repair the boiler, as originally constructed, became weaker. Further, there are traces of considerable and long-continued leakage from the escape-pipe, till the thickness of the plates, originally nearly $\frac{1}{2}$ inch thick (correctly 7-16th in.), are reduced at that point to about $\frac{1}{4}$ in. Looking down into the fire-brick flue upon which the boiler rested, we notice traces of leakage fretted into the glazed surface of the bricks. Comparing these evidences with the state of the tubes below the boiler, we found rivets in a state quite sufficient to confirm the previously-formed opinion. The care of the proprietor of the works to prevent an explosion was abundantly shown in the profusion of steam-valves for the escape of surplus steam, alike from each boiler and from the whole set. The set consisted of two furnace-boilers and two firing-boilers; the last two were, one a Cornish and the other a patent Galloway. Usually they are worked three on and one off, but at the time of the accident all four were on. Three are supposed to be sufficient at full pressure to do the work assigned to them, which is that of supplying power to the engine to work a sheet-mill and a forge-mill. The fact that there has been only one fatal accident at the works from the time the oldest portion of the establishment was laid down (in 1845) till this occurrence abundantly proves that the operations are usually conducted with great care. In that case the accident had no connection with the steam—the engineman was killed by getting his arm in the shears.

We have the fullest belief that everyone in charge of the works, or any portion of them, had the most complete confidence in the security of the boiler, and of its fitness to continue to carry the pressure put upon it. But our conviction is only a little less strong, that if this boiler had been under such inspection as that which boiler assurance companies provide the proprietors and their workpeople would have been so fully informed as to its condition, that it would have been long ago either laid off or had its pressure very greatly reduced. The damage done to the works may be repaired at an outlay of, perhaps, 800l. Both in that respect and likewise in regard to the fatal consequences which have followed, this explosion (even if the whole 15 should die) will be less destructive than the one which in 1862 laid much of the Millfields Finished Iron Works in ruins, and killed 28 persons. The boilers in each case were of a similar size and construction, and, singularly enough, in both cases a workman was blown into the canal, and his corpse fished up after the ruins had been searched for it in vain.

A professional account of the cause of the accident will be given in evidence yet to be supplied to the coroners, who would seem to be adopting every measure to furnish their juries with the fullest information as to their correct cause. It was the Millfields accident which induced the ironmasters of South Staffordshire to start the Midland Steam-Boiler Inspection and Assurance Company. Here and there throughout that district there are ironmasters who still regard the provisions they have made for the security of their machinery so complete as to make it unnecessary for them to incur the expense either of insurance or inspection. Mr. WELLS would seem to be of this minority. Himself a practical man, having an experience of nearly half a century, he had made, as we have just intimated, every apparent provision for obviating such a calamity. These were probably well enough at the time they were made, but they soon required revision. Such revision would have been secured if the modern advantages presented in the inspection companies had been accepted.

Within the past few days another boiler accident has occurred at an iron works in this kingdom, the circumstances attending which go more forcibly to show how valuable is the assistance which ironmasters have at their command in associations of the class of which we have been speaking. In that case a Cornish boiler, originally fired internally, was now fired outside, with the flame passing through the tube. It collapsed from end to end, so completely that the top part was forced down almost to the bottom of the tube. It was working at about 50 lbs. to the inch, yet the tube was originally so weak that it was not fit to work without material strengthening. The top had flattened somewhat, so that the diameter of the tube, which may have been, for instance, 3 feet 6 inches in one place became 3 feet 3 or 4 inches in another. By these, all Mr. FAIRBAIRN'S calculations

show that such a tube ought to have been strengthened by at least one substantial wrought-iron ring. We happen to know that the proprietor of the boiler proposed it for inspection and assurance to the Boiler Inspection Company in his district, but the engineer refused to accept it unless the ring we have mentioned should be placed round it. The proprietor of the machinery entertained the fullest confidence in his engineer, who did not believe in the necessity for the strengthening operations described, and declined to undertake the expense. Thereupon the premium which had been paid to the assurance company was sent back, and the risk declined. That negotiation took place some three years ago. True to the almost inevitable consequences, the boiler, as we have said, has just collapsed, and collapsed so thoroughly as to prove its entire weakness, and at the same time demonstrates the accuracy of Mr. FAIRBAIRN'S calculations, and the wisdom of the Assurance Company in refusing to accept its care. It is a cause for satisfaction that when the collapse took place most of the workpeople were out of the way. By the collapse the brickwork by which it was surrounded was blown out with great force from each end in particular, and the boiler, which occupied the other side of a wall abutting on the towing-path of the canal, was forced out of its bed, and for a time interfered with the traffic.

We very strongly urge upon the proprietors of boilers at mines and iron works that they should none of them any longer place confidence in their own workpeople alone, but that they should, for their own comfort, rid themselves of as much of the responsibility which now rests upon them in the event of accidents happening, when the services of the associations we talk of are not invoked. It is clear that the public mind is becoming alive to the provision for safety which these associations provide, and already we observe in connection with the Moxley accident that that feeling has begun to find expression in a somewhat prominent manner.

NEW SYSTEM OF IRON AND STEEL MAKING—No. III.

BY G. J. AND T. C. HINDE.

The whole of the wrought or malleable iron produced in Great Britain at present is made from pig-iron, either in the charcoal refinery or in the puddling-furnace. Besides the carbon requisite for rendering metallic iron fusible, we generally find coke-smelted pig-iron alloyed with one or more of the elements silicon, sulphur, phosphorus, aluminium, calcium, magnesium, and occasionally with some others. Upon the more or less complete removal of these, together with nearly the whole of the carbon, depends the quality of the malleable iron. No method has been devised of removing these substances while in their elementary or metallic state, hence it is necessary to combine them with oxygen before they can be separated. This oxidation may be effected either by exposing them at a high temperature to the action of atmospheric air, or by bringing them in contact with solid bodies containing an excess of oxygen, such as peroxide of manganese, peroxide of iron, the nitrate salts, and some other analogous substances. Prior to the introduction of puddling, the charcoal refinery was the only means used for converting cast into malleable iron. The pig-iron was melted down with charcoal into the hearth, and there exposed to the action of the blast until the carbon, silicon, sulphur, &c., were so far oxidised that the iron assumed the pasty, welding condition of malleable iron, and was then taken to the hammer as a "loup" or "bloom," the oxidised impurities of a volatile nature passing off in a gaseous condition, while the more permanent, such as silica, remained in the cinder. The potash formed by the combustion of the fuel largely assisted this operation. It is a well-known principle that chemical reactions are much more readily effected where new combinations of matter can be formed, than where the object is simply to break up an existing combination. The potash from the fuel has a great affinity for silica; and by thus enabling the silicon at the moment of its oxidation to enter into a new compound, silicate of potash, greatly facilitates the oxidation of the silicon; while the silicate of potash, being of a very fusible nature, forms a bath of molten cinder or slag, in which the other impurities are readily dissolved. This charcoal refinery process is still in use for some special purposes, as charcoal bars for tin-plates, charcoal horse-nail rods, gun-iron, &c., but the pig-iron is now generally melted down with coke in a cupola or run-out fire, and there blown into in the same manner that refined plate-metal is made, and afterwards run into the hearth of the charcoal forge; the object of this preparatory process being, of course, to reduce the quantity of charcoal needed. Whatever may be the merits or defects of this process, the cost and scarcity of charcoal in this country restrict its application to iron for such particular uses as we have named, where the quality must be had irrespective of the price.

About the middle of last century the manufacture of wrought-iron in Great Britain, from the increasing cost and failing supplies of charcoal, had dwindled down to very insignificant proportions, most of the iron for home consumption even being imported from Sweden and Russia, and the records of the Patent Office show the numerous attempts which were made to utilise pit coal in lieu of wood fuel. Cranage, Onions, Cort, and others were all labouring to the same end, and it is difficult now to assign to each his part in the invention of the puddling process, by which their purpose was ultimately accomplished. In its essence, that of oxidising and removing the impurities from the iron, the puddling process is the same as the older method. In the charcoal refinery the object is attained by exposing the pig-iron to the action of oxygen while in contact with a pure fuel. In the puddling-furnace the heat necessary to effect the oxidising operation is generated from an impure fuel, but the combustion of this impure fuel is conducted in a separate chamber, thus avoiding any contact with the iron. There are two varieties of puddling in use—one termed "puddling" and the other "boiling." The "puddling" proper is commonly applied to refined plate metal—i.e., pig-iron which has been passed through a common refinery or run-out fire, or to the less fusible kinds of white pig-iron, while the greyer and more fusible qualities of pig-iron are usually subjected to the method called "boiling." In the puddling process most of the cinder is allowed to run off as formed, and the oxidation is chiefly, therefore, effected by the oxygen of the atmosphere. In the boiling process, on the contrary, the iron is kept nearly immersed in molten cinder. This cinder is formed by the melting of the so-called "fetting," and upon the character of this fetting largely depends the success of the operation in removing the impurities of the cast-iron, their oxidation in this case being effected chiefly by the oxygen furnished by the cinder. In accordance with the chemical law, that bodies are much more prone to enter into new combinations at the moment of emerging from a previous one—or, as it is termed, when in the nascent state—than when they exist in an uncombined state, we should expect to find that the best substances for forming the cinder would be those which not only supplied the oxygen requisite for the oxidation of the impurities, but which afforded a material with which the impurities would readily combine at the moment of oxidation, and this we find to be the case—one of the most suitable, the peroxide of manganese, for example, surrenders a portion of its oxygen to the silicon, while the resulting protoxide of manganese is a body for which the newly-formed silica has the strongest affinity; the union of these two resulting in a very fusible cinder, which greatly assists in dissolving and carrying away the other impurities. The action of peroxide of iron, the nitrates of potash and soda, and of some other oxygen-affording bodies, is precisely similar in principle to that of the peroxide of manganese, though varying in degree, and the use of some of them, independent of questions of cost, is limited by their destructive action on the fire-bricks, and of others by their being too volatile to stand the heat of the furnace. But whichever of the three modes be adopted, whether the charcoal forge, the puddling, or the boiling process, all the malleable iron of Great Britain is made on one principle—that of bringing cast-iron to a state of fusion, and while in that state oxidising and removing its impurities. It, therefore, becomes of the utmost importance to ascertain whether this is the true principle of obtaining malleable iron from the ore. If operating on a sound principle, practice and experience, from time to time, will have suggested such improvements in the details and mode of carrying it into effect, that we may expect an approximately satisfactory result to have been achieved; but if, on the contrary, the principle itself is unsound, then no improvement in details can possibly rectify the original error, and the position resembles that of a man arguing from false premises—his conclusions must necessarily

be wrong. Before we can answer this paramount question, whether the right principle of obtaining malleable iron from the ore is the one now adopted—first to convert the iron ore into fusible cast-iron, and then to oxidise out the alloyed matters, by the combination of which its fusibility is produced—we must examine the chemical constitution of the iron ore, and see what are its chemical relations to malleable iron.

We may say that, virtually, the whole of the iron ores used in Great Britain consist of the peroxides and of the carbonates of the protoxide of iron; and these latter are generally converted into peroxides by calcination previous to smelting. No phosphates or sulphates of iron or natural silicates are used in this country; and when the sample is found to contain any considerable quantity of pyrites or sulphide of iron it is generally rejected. Phosphorus and sulphur are found associated with many of the iron ores used in Great Britain, but not often in chemical combination with the oxide of iron. Phosphorus is generally present as phosphate of lime or magnesia, and the sulphur is generally found combined with metallic iron, not the oxide, in the shape of pyrites—i.e., sulphide of iron. No natural silicates of iron are smelted in Britain. We use the term natural silicates because, although the artificial silicate of iron formed in puddling and in the mill furnaces as forge and mill cinders is used, it has no bearing on the point we are now investigating. The silica present in iron ores generally exists either in a free state—as quartz crystals, sand, &c.—or it is combined with alumina, forming the clay from which the clay ironstones obtain their name; and it may be accepted as a general rule that whatever may be the nature or quantity of the extraneous substances accompanying the iron ores smelted in Britain, these substances are only in mechanical association, and not in chemical combination, with the oxides of iron. This is equally true whether we speak of the pure hematite ore, containing 70 per cent., or of a clay ironstone, yielding only 25 per cent. of iron. As the oxide of iron, then, is found uncombined with any other body, it follows that the withdrawal of the oxygen from the oxide should leave pure malleable iron as the result, and experiment confirms this deduction. If we expose a piece of iron ore of any size or description to the action of carbon in a crucible the oxygen is withdrawn from the ore, and malleable iron remains. If the piece of iron ore be of the rich hematite class a solid lump of malleable iron is the result. If the iron ore be associated with much earthy matter the metallic iron is found disseminated amongst, but not combined with, the earthy matter, in thin leaves or veins. Specimens of malleable iron so formed are often found in the calcined heaps of blackband, where the oxygen of the atmosphere has been accidentally excluded, the carbonaceous matter of the blackband having sufficed for the removal of the oxygen from the ore, and the consequent production of pure malleable iron.

Pure malleable iron is infusible in our furnaces, and can only be rendered fusible by combining or alloying it with some other substance; this essential characteristic of pure malleable iron, its infusibility, becoming less marked, and finally ceasing altogether, as the percentage of alloy increases. The converse of this proposition also holds good—that as the percentage of alloy is lessened so the fusibility of the iron is decreased, and if we can remove the alloy altogether we obtain pure infusible malleable iron. We find, then, that the oxide of iron in the ore is not combined with any other body; that the removal of the oxygen from this oxide leaves pure malleable infusible iron; that the condition of fusibility can only be obtained by alloying this pure malleable iron with some other substance which renders it impure, and thus fusible; and that to obtain pure malleable iron from this impure and fusible iron another operation of exactly the reverse character must be performed—that of removing the alloyed matter, thus restoring the iron to its original condition of purity, malleability, and infusibility. As long, therefore, as we obtain malleable iron from the ore by any process which involves the fusion of the iron, so long we are compelled to combine or alloy the pure iron contained in the ore with some alloy or impurity which will impart the property of fusibility, and afterwards subject this fusible impure iron to another operation, expressly to remove that impurity, by the combination of which only were we enabled to render the fusion of the iron practicable. The iron, as we have shown, exists in the ore as pure malleable infusible iron, but united with a certain percentage of oxygen. Remove this oxygen, and the pure malleable iron remains mechanically associated, but not chemically combined, with any earthy matter which was present in the ore. We have before stated that this proposition is demonstrably true by actual experiment upon a piece of iron ore in the crucible; hence, we conclude that a scientifically true process of producing malleable iron would be to obtain the metallic iron which exists in the ore without loss of quantity, and without admixture or alloy, by which its original properties of purity and malleability would be destroyed or lessened. The purity and malleability of iron are, as we have seen, in direct ratio to its infusibility. Any process, therefore, which is based on the fusion of the iron must necessarily destroy its purity and malleability, which have to be restored, so far as they can be restored, but which is never perfectly accomplished, by subsequent operations of a costly and wasteful nature. We, therefore, lay down as the very element and basis of a true process for obtaining malleable iron from the ore, that it must be conducted without having recourse to the fusion of the iron.

[To be concluded in next week's Mining Journal.]

MINING IN SOUTH STAFFORDSHIRE.

South Staffordshire is again brought prominently before the mining world by the publication of the reports of the Government Inspectors. The extent of the mineral capabilities of the district is, according to Mr. BAKER, who has charge of the district on behalf of the Government, such as to induce very grave conclusions in the minds of all persons engaged in the production of iron throughout that famous locality. This Inspector, after showing that out of the 544 collieries referred to in his last report there have been about 300 in operation in the course of the year, producing 10,268,000 tons, remarks that—

"Such a large and continuous drain of the mineral resources of this district must, at no very remote period, and, indeed, within a few years, completely exhaust the supply, so far as the coal can be wrought for the purpose of iron manufacture."

If this be true, something like the death knell of much of the wealth-producing life of that part of the kingdom has been sounded. Mr. BAKER continues—

"There will, however, still be thin seams of coal left, suitable for domestic use. The Royal Commission appointed to enquire into this important question will, however, no doubt, be able more clearly to define the probable duration of this coal field, a matter of the greatest moment to the iron and hardware trades of this important district."

Of the greatest moment, most undoubtedly, and pregnant with most serious considerations. Of the rapid consumption of coal in that district we have not, as our readers are aware, been unobservant. At the same time, we have not joined fully in the sentiments of those who have forbidden nothing but evil for the district in question, but have rather desired to give as much prominence as may be to those features which have gone to show that its end is not yet. There are many fuel-saving operations in use, and yet to be adopted, by which the resources of the district may be husbanded, at the same time that there are discoveries yet to be made of the existence of coal within what may be fairly regarded as the boundaries of the district under notice. But the statement here made by Mr. BAKER is sufficiently grave to induce the most thoughtful reflections on the part of those who own the coal, and on the part, likewise, of those who use it. It is a fact by all those to be borne in mind that, notwithstanding the year 1847 being a time of very slack trade, yet the output of coal was larger in that district than in the year before. Now a large quantity of the fuel of South Staffordshire and East Worcestershire leaves the district by rail for distant domestic markets. To this fact the increase spoken of may be chiefly attributed. For instance, the Cannock Chase collieries are devoted almost exclusively to this branch of the trade.

We shall have to refer to this very grave question of the coal supply on another occasion. Meanwhile we will notice one or two encouraging facts in connection with the colliery management of the district under discussion. The coal is being gotten there at a gradually reducing amount of life cost. Last year the deaths were 111, whereas the average for the ten years ending with 1860 was 162, and for the seven years ending with last year the average was 112. Still Mr. BAKER thinks that if ordinary care, ability, and supervision had been

exercised by the managers and persons connected with the mines, 30 per cent. of the 111 lives might have been saved.

As is pretty well known, the chief cause of accident in the South Staffordshire district is the fall of roof and coal. From this class of occurrences more than half (the current number is 60) of the deaths have arisen. Of that 60, Mr. BAKER believes that 28 per cent. have been brought about through recklessness, insufficiency of timbering, and what is termed the "hungry" practice of reducing pillars in the thick seams. Of course Mr. BAKER disapproves, as everyone else must, of the abuses which the district displays of the best phases of the butty system; and he dwells with much force upon the extent to which these abuses are fostered by the want of constant supervision on the part of the agents, who are supposed to represent the proprietors. By the butty system the chartermasters, who are the butties, have no other interest than the getting out of the coal as rapidly as possible, regardless of certain interests of the proprietors, which should be watched, if not by himself by his manager. How far these are sufficiently watched is a question upon which Mr. BAKER and some of the ground bailiffs are at issue. How, however, the large number of pits which often comprise one colliery in the district spoken of can be efficiently watched on the part of the proprietors generally by the few men who have the superintendence of them is most certainly a question. Of course increased oversight implies increased cost in the management; but now that the rapid consumption of fuel is occasioning grave forebodings, proprietors will, probably, see it to be their interest to enquire if in the matter of management a somewhat further outlay may not be compatible with ultimate economy.

THE ROYAL CORNWALL POLYTECHNIC INSTITUTION.

The present meeting of this institution promises to be more than usually attractive and successful; the mechanical department, which is always the most important to the mining community, being well supplied with novelties and improvements, and every facility having been given for the merits of the several exhibits to be practically tested. On Wednesday Haupt's Boring-Machine was tested at Falmouth Docks, and the trial was in every respect satisfactory, several holes being bored in a block of granite with considerable speed—in one instance 14 in. being driven in 3½ minutes. The boring apparatus, which is 38 in. long and weighs 150 lbs., is fitted to stands, which admit of freedom of working to various degrees in different directions. With stand it weighs 250 lbs. The machine gives the striking tool the three same motions that are observable in hand drilling—the stroke, the revolution, and the feed. All these motions are automatically made by the machine, and are self-adjusting to all differences in the hardness of rocks or varying speed of penetration. It requires about 2-horse power of steam, at 30 to 40 lbs. pressure. It works as well, or even better, with compressed air. It makes any desired number of strokes per minute up to 450. The force of the ordinary stroke is estimated at 200 lbs., but it may be made more or less by the turning of a screw connected with the valve gear. The smallest size machines will drill holes up to 1½ in. in diameter. Machines may be made to drill holes of any required size. It penetrates from 1 to 6 or 7 (or even more) strokes per minute, according to the hardness of the stone. It will drill 24 in. without changing the drill, stopping the machine, unless required to put in a sharper drill. By putting in longer drilling tools any depth required for blasting purposes may be reached. The drilling tool may be taken out and changed in one minute, and without moving the machine.

Some very successful experiments were likewise made with Nobel's Dynamite, a preparation of nitro-glycerine, which is believed to possess all the advantages of that substance with none of its disadvantages. It can only be exploded by a percussion cap, which is ignited by a fuse. Concussion seems to have no effect upon it. The holes are tampered with water. If ignited by a match or similar means it burns harmlessly away. Amongst the other exhibitors were Mr. F. B. Doering, whose boring machine has for some time been in successful operation at Tincroft. Mr. W. Husband, of Hayle, exhibits an improved safety-governor for Cornish pumping-engines, intended to meet a deficiency in mechanical appliances from which many accidents have arisen. Mr. Richardson shows plans of tubular shaft casing with lifting stair for mines, introducing the principle of the principle of the machine consists in forcing water through an opening, the size of which is regulated by the speed of the engine, over which is fixed a piston connected with the taps or equilibrium handle. While the engine is working at its regular rate of speed this piston is not affected, but should any accident take place the effect will be the opening of the equilibrium handle by the increased pressure on this piston, and thus throwing the steam on the opposite side of the piston, which must naturally reduce the force of the blow upon the catches. For a very well executed plan of East Pool Mine, by the agent, Capt. Maynard, the committee awarded 20s., and a prize of 10s. 6d. was also awarded to a plan by a working miner of West Wheal Lovell (T. B. Provis). The committee also call attention to the excellent plans of the Great Wheal Vor and Great Wheal Fortune Mines, sent for exhibition by Mr. Henderson. The first bronze medal for an improved magneto-electrical machine was awarded to Mr. J. Browning, of London. Dials by Mr. Jeffery, of Camborne, and by Mr. Newton, of St. Day, were highly commended.

Amongst the Awards of more immediate interest to the readers of the Mining Journal may be mentioned—A model of a skip-road by Mr. Noah Coward, of East Caradon Mine, was awarded the second bronze medal for the novelty of the invention, and to encourage inventors to perfect a catch that in all cases may be depended on. To the working models of steam-engines by Henson, the committee have awarded small prizes of encouragement. For an improved screw-driver, in which, by the ingenious application of a telescopic handle, power is obtained, so that it may be worked in more difficult positions than the ordinary driver, the second bronze medal was awarded to Mr. Andrewartha, of Devon. The first silver medal was awarded to Mr. Husband, of Hayle, for his ingenious machine, intended to lessen the force of blow in our Cornish pumping engines in case of breakage or accident, and its value has been tested by being in use some months. The principle of the machine consists in forcing water through an opening, the size of which is regulated by the speed of the engine, over which is fixed a piston connected with the taps or equilibrium handle. While the engine is working at its regular rate of speed this piston is not affected, but should any accident take place the effect will be the opening of the equilibrium handle by the increased pressure on this piston, and thus throwing the steam on the opposite side of the piston, which must naturally reduce the force of the blow upon the catches. For a very well executed plan of East Pool Mine, by the agent, Capt. Maynard, the committee awarded 20s., and a prize of 10s. 6d. was also awarded to a plan by a working miner of West Wheal Lovell (T. B. Provis). The committee also call attention to the excellent plans of the Great Wheal Vor and Great Wheal Fortune Mines, sent for exhibition by Mr. Henderson. The first bronze medal for an improved magneto-electrical machine was awarded to Mr. J. Browning, of London. Dials by Mr. Jeffery, of Camborne, and by Mr. Newton, of St. Day, were highly commended.

MINERS' ASSOCIATION OF CORNWALL AND DEVON.

At the annual meeting of this association, which was presided over by Mr. J. St. Aubyn, M.P., several important and interesting papers were contributed, including one by the Rev. S. Rogers, "On the Progress of the Association," pointing out the necessity for the proper education of the miners. He drew attention to the question of boring-machines, suggested the formation of a library, and advised the purchase of a spectroscope. To develop the resources of the county they required discovery, and the observation and collection of recorded facts. There was likewise one "On the Deep Adit of the Harta," by Mr. Baumann, and two by Mr. J. H. Collins, the lecturer to the association, "On Auriferous Drifts and Stream Tin." Mr. Collins's paper dealt with the formation of nuggets in auriferous drift, and recorded the results of many experiments. The conclusions of those from whom Mr. Collins drew his particulars were that in many cases nuggets increased in size as they lay in the drift; another conclusion was that stream tin had been formed in the same way.

A New Process for the Separation of Copper, Iron, and other Heavy Impurities from Tin Ore was well described in a paper by Mr. R. Pearce, formerly lecturer to the association. A very considerable proportion of the tin ore which has been prepared in the usual way for the smelting works in Cornwall contains a number of impurities which cannot be separated by the ordinary processes of washing. Copper does not generally exist in any very large quantities; but its presence in minute proportions very materially affects the quality of the metal. It is generally present in the form of native copper or black sulphide of copper, resulting from imperfect calcination of cupiferous pyrites. Iron is more abundantly found, originating partly in the wear and tear of the stamp-heads, partly as the result of calcination of white and yellow muds, and carbonate of iron. The oxide of tin is so intimately mixed with the oxide of iron that it becomes a matter of utter impossibility to effect proper separation by the ordinary process of washing. It is necessary to grind the oxide of tin to an impalpable powder before a proper isolation of its particles from those of oxide of iron can be effected. This entails extra cost, and a great loss of tin. The loss to miners in setting ores which contain a large percentage of impurities must be very great, as by the ordinary method of assay it is impossible to obtain anything like accurate results. The smelters are accordingly obliged to give a lower standard, as there is infinitely more trouble in smelting. In the St. Just district, where iron and copper are found associated with the tin, some of the miners have for a considerable time used acid in purification. That may be tolerably well adapted to separate the copper, but cannot have much effect upon the iron. Native copper and sulphide of copper are hardly affected by the acids used, unless oxygen in some form is admitted. The plan which Mr. Pearce proposed to adopt, which has been used with great success in the separation of copper and other metals from silver, is to subject the impure tin to the combined action of steam and air in conjunction with a little dilute acid. A mixture of sulphuric and hydrochloric acids will answer well for this purpose, or hydrochloric acid alone. These acids Mr. Pearce proposes to bring to bear upon the tin in a boiler, into which acid water is to be put, and the steam turned on. Boiling to be continued for about one hour. By this process the impurities are so far removed or changed in specific gravity that they may be separated with very little trouble by washing. By this means a large quantity of tin ore now sold as of inferior quality may at trifling cost be converted into tin of good quality.

IRON AND STEEL INSTITUTE FOR GREAT BRITAIN.—Our Correspondent, in his "Report from Northumberland and Durham," refers to a highly important paper "On the Position of the Iron Trade in Relation to Technical Education," read at the Quarterly Meeting of Ironmasters at Newcastle, on Tuesday, by Mr. JOHN JONES, which resulted in steps being taken which can scarcely fail to be of material advantage to the iron and steel trade generally. Mr. JONES pointed out that subjects of interest to the iron trade had been dis-

cussed at meetings of various engineering and scientific societies, but that anyone wishing to make a communication to the iron trade had no direct or acknowledged means of reaching that body, or any great section of it. This state of things is the more to be deplored, considering the rapid progress making in foreign countries, and the consequent necessity for the ironmasters of Great Britain to avail themselves of every discovery and improvement in order to maintain their position. To permit of more frequent intercommunication between the various members of the trade, and to give facilities to individuals to make known to the general body their successes or failures, and thus to diffuse the advantages of experience, Mr. JONES hit upon the happy idea of an "Iron and Steel Institute for Great Britain"—a British Association, so to speak, devoted exclusively to the iron and steel trades—at the periodical meetings of which objects of interest to the trade might be exhibited, and a general interchange of opinion take place. The project has been inaugurated under the most favourable auspices, and is certainly deserving of the most complete success.

REPORT FROM SCOTLAND.

SEPT. 30.—The Pig-Iron market has been quiet during the week, with a perceptible want of life; still, a steady business has been transacted, at almost stationary prices. During the month pretty large transactions were entered into, and if the buyers prove good holders, and take the iron out of the market, prices will certainly advance; but if, on the other hand, they prove weak holders, and throw the warrants on the market, a decline is inevitable, and it is, therefore, difficult just now to divine which way quotations may rule when the iron comes to maturity. The shipments for the week show an improvement on the same week of last year, the quantities being respectively this year 14,660 tons, against 13,295 tons in the corresponding week of 1867. To date the imports of Middlesbrough iron have increased 38,920 tons over the same period of last year, and Scotch pig-iron has decreased to the same extent in the like period of time. The pig-iron market opened steady on Monday, and business was done at 53s. 7½d. cash, and 53s. 10d. a month; but yesterday the market was weaker, and 53s. 6d. was all that could be obtained, and at the close buyers offered 1d. a ton less. To-day a few thousand tons were disposed of at 53s. 5d. and 53s. 6d. cash, and 53s. 8d. a month, closing firm, buyers 53s. 6d. cash and 53s. 8d. a month, sellers a shade higher. No. 1, g.m.b., 53s. 9d.; No. 3, 52s. 9d.; Coltness, 59s.; Gartsherrie, 58s.; Langloan, 54s. 6d. Bar-iron is in extra demand to meet the shipments at the close of the season, now being rapidly proceeded with, but prices are uninfluenced by the temporary briskness. Bar and angle iron also in fair demand, and generally the works are in complete operation. The tin and tube makers at Coatbridge are also full of orders. Coals keep firm in price, with a fair business passing, and the turn of the market is in sellers' favour, especially for the best qualities of house coal for domestic use. Shipping coal is still enquired for, but rather at former rates. During the week just ended the shipments from all the Scotch ports have declined to 32,150 tons, against 34,675 tons for the same week in last year. At a miners' Conference, held on Monday, to hear the replies to the circulars addressed to the coalmasters, noticed last week, the local press has been informed that these were generally favourable to the concession of the advance of 6d. a day, but on making special enquiry of the leading coalmasters in town this forenoon we learn that the greater portion made no reply to the circular at all, and were not likely to concede an advance in the meantime. Those working at the shale pits were in receipt of good wages, but coal oil is only bringing from 1s. 2d. to 1s. 3d. a gallon, and, consequently, shale is only being worked to a limited extent. The ironstone miners in the Maryhill district, the colliers of Govan Works, and those at Fulton Pit, Johnstone district, are on strike, in hope of forcing an advance. Makers of iron have quantities in stock, and, as there is an absence of demand, they are rather inclined to stop their furnaces and bring in their coal to the market, which would have the double effect of keeping down the colliers' wages and the price of coal by the one operation. Miners would require to act cautiously under the circumstances.

There is a report current that Mr. James Baird (Gartsherrie) will contest the Northern Division of Lanarkshire with the present member, Sir E. Colebrooke, but the latter is a general favourite.

REPORT FROM MONMOUTH AND SOUTH WALES.

OCT. 1.—For some weeks past there has been a better feeling evinced in the Iron Trade of this district, and it is satisfactory to find that as the year progresses it is gradually strengthening. In last week's report it was stated that the general opinion prevailing was that no attempt would be made at the preliminary meeting to obtain an advance on list quotations, and such has proved to be correct, as it was believed that such a proceeding would only tend to check business operations, and injure the future prospects of the trade, there being so many of the second-class houses unable to obtain list prices. During the period intervening between the preliminary and final meetings but few transactions are entered into, and the present quarter is no exception to the rule. Although but few transactions have been entered into during the past week, the hands engaged at the leading establishments have been fully employed, chiefly in the completion of Russian engagements, the termination of the navigation season to that country being close at hand. Enquiries continue tolerably numerous, but the actual business transacted has not been for any considerable quantities. There is, however, a greater disposition evinced on the part of buyers to enter into transactions than for some time past, and this gives hopes of an increase taking place in the demand before long. Probably transactions have been somewhat checked by the rumour currently circulated that an effort would be made at the preliminary quarterly meeting to advance prices, but now that question has been settled for the next three months we may look for an increase of orders. During the past two years there has been such a depression in the trade as has not been equalled for a quarter of a century, but as public confidence is being again gradually restored in railway securities, it is not unreasonable to expect that the good feeling which lately sprung up in the home trade will not only be sustained, but steadily improve, until something like former activity and vigour are again witnessed. There is a greater inclination on the part of home buyers to purchase more freely, and now that quotations have been fixed for the next three months it is expected that several fresh engagements will speedily be entered into. There is a considerable decrease in the exports to the United States, and at the principal place of shipment there is only freight to America in the market. There is no doubt that this, to a great extent, is owing to the forthcoming election of President, and until that is settled it is not expected any improvement will be experienced. A few cargoes of rails are being dispatched to Russia, makers being anxious to complete their engagements before the close of the present season. Several Russian agents were present at the preliminary meeting, and this has given rise to a belief that there will be a further demand for rails from the Muscovite empire. The insurrection in Spain is causing some uneasiness in the minds of several makers, and considerable excitement on the Continent, as it is difficult to say what course France will pursue in the event of its success, but should the Emperor decide not to interfere it will not materially affect commercial transactions with continental houses, from which enquiries have of late become more numerous, principally for the miscellaneous descriptions. For pigs of the best brands there is an average demand, and quotations tolerably well maintained. Tin-plate makers are fairly placed for orders, and as a rule, the works well employed.

In the shipments of Steam Coal there is more activity than for several months past, and there is now unmistakable signs of an improvement having set in, the favourable winds which prevailed for several days having been the means of enabling a large number of vessels to arrive and leave the ports, thus placing the trade in a more favourable position than it has been for several weeks past. Several vessels of heavy tonnage are now being laden for the East, and clearances being rapidly made. The exports during the past week or ten days will, no doubt, show a very favourable increase. From some of the mail packet stations there are but few enquiries, and until the stocks accumulated there during the Abyssinian expedition are considerably reduced little or no improvement is expected to take place. A very small amount of business is being transacted with Baltic houses, and the exports to that quarter during the present

season will, no doubt, be below those of the past, the principal orders having been sent to North of England houses. There is a fair amount of business being done with the Mediterranean ports and continental houses, and to the Southern States of America an average quantity is being sent. The House Coal trade has revived to a slight extent, and shipments are being more regularly made; but before anything like a satisfactory state of things is attained the demand will have to largely expand.

During the past week there have been some large importations of calamine, or zinc ores, and also copper ores into the port, and the general metal trade of the town and district is evidently improving.

The Ashton Vale Iron Company (Limited) annual meeting was held on Monday at the works, Ashton Vale, under the presidency of Mr. W. H. Miles, the Chairman of the Board. The report was adopted after some discussion. On the motion of the Chairman, seconded by Mr. Abbott, Mr. Francis Adams was elected director in the room of Mr. R. C. Ward, deceased, and the retiring directors and auditors were re-elected.

The arrivals at Swansea include—The Martha, from Carthage, with copper ore and zinc ore, to order. Aux Revolt, from Alicante, with 180 tons of Esparto grass for G. E. Bird and Co., and 100 tons of zinc ore for Dillwyn and Co. Mary, from Carlotorte, with 170 tons of calamine for Richards, Power, and Co. Concelano Maria, from Aveiro, with 154 tons of copper ore, and 32 tons of lead ore, for Richardson and Co. Lena, from Carlotorte, with 283 tons of calamine for Richardson Brothers. Demosthenes, from Carlotorte, with 365 tons of zinc ore for H. Bath and Son. Maria and Aline, from Santander, with 10 tons of iron ore for Richards, Power, and Co. Samuel, from Carlotorte, with 290 tons of zinc ore to order. Beaubien, from Santander, with 131 tons of iron ore for Richards, Power, and Co. Lizzie, from Brevig, with mining timber for Efford, Williams, and Co. Delphi, from Carlotorte, with 390 tons of calamine zinc ore to order. Edith May, from Carlotorte, with 350 tons of zinc ore, for H. Bath and Son. Rosetta, from Coquilmo, with 630 tons of copper regulus, for H. Bath and Son. Havre, from Havre, with 30 tons of copper ore for H. Bath and Son. Blanche, from Carthage, with 290 tons of zinc ore for Mr. Homfray.

THE TIN-PLATE TRADE.—The quarterly meeting of the members of the Tin-Plate Trade was held at the Bell Hotel, Gloucester, Mr. Woodroffe, of the Machen Works, Monmouthshire, in the chair. There was a tolerably good attendance of both manufacturers and buyers, among the latter being Messrs. Nash, of Liverpool; Von Dadelzen and North, London; and Handley, Birmingham. The Chairman expressed an opinion that tin would be higher in price, and there would, probably, be an advance in pigs as well. Since the last meeting quotations for plates have not kept up as anticipated, not because the demand has decreased, but owing to the increase in the price of American requirements keep about the same, and from the other foreign markets there is an average enquiry. It was stated that the resolution agreed to at the last meeting to reduce the production had not been loyally observed by the trade generally, and this, together with the opening of so many new establishments, kept prices down. No change was made in quotations, consequently they remain the same as during the last quarter. The provisions of the new Factory Act were referred to, and it was stated that the men complained more than the employers of the objectionable character of many of the regulations. The members, as usual, dined together after the meeting.

FEARFUL COLLIERIES EXPLOSION—TEN LIVES LOST.—On Wednesday a fearful accident occurred at the New British Iron Company's Green Pit, near Buxton, by which 10 poor fellows lost their lives, and 15 others were severely injured. The floor in the vicinity of the mouth of the shaft was torn up, and fully testified to the great force of the explosion. The No. 1 shaft was blocked up for some time. Mr. Ralph Darlington, underground manager, and Mr. Robert Taylor, underlooker of No. 2 pit, were the first who descended the No. 2 shaft after the explosion. Mr. Burton, with Mr. T. Lloyd Evans, arrived at the scene of the accident in 20 minutes after it occurred, and shortly afterwards Dr. Burton, with Mr. Evans, the manager of the New British Iron Company, and Mr. Popplewell, engineer, descended the pit, for the purpose of ascertaining the number of dead and wounded, and to make the necessary arrangements. There was great difficulty in finding all who were killed, owing to the rubbish beneath which some of them were buried. The excitement in the pit was great, and the men who were drawn to the bank. As soon as the accident became known the scene of excitement throughout the neighbourhood was intense. Six of the dead bodies, and all the injured men and boys, were wound up the No. 2 pit, and those who were killed were placed in the lamp-room, and were soon identified. They were shortly afterwards taken to their homes in conveyances. The remaining four dead bodies were drawn up the No. 1 pit and placed in carts in readiness. Some of the injured seemed in a very light state, and these were one of the most exciting characters, and in a few instances it required much time to restore them.

REPORT FROM NORTHUMBERLAND AND DURHAM.

OCT. 1.—The Coal and Iron Trades do not improve, as was expected a short time ago; true, many branches of trade here have certainly improved very considerably; this can be confidently said respecting the shipbuilding trade and some others,—some branches of the coal trade are improving also, that is for house and gas coal, but the trade for steam and manufacturing coal is still much depressed, with little appearance, at present, of a better tendency.

The Quarterly Meeting of Ironmasters was held in Newcastle, on Tuesday, when various subjects of great interest, in connection with the trade, were discussed. Many articles of interest were also shown in the Assembly-rooms, although, owing to the want of time, the exhibition was not so extensive as might have been expected. The following are the most prominent objects of interest:—

Samples of Steel were shown by Messrs. Fox, Head, and Co. from Ingots (Steeple and Martin) cast by Messrs. B. Samuelson and Co., and the wonderful pliability of the metal, two-thirds made of Cleveland Iron, created considerable astonishment. It was worked in three different processes, known as the A, B, and C, and the average strains of each were satisfactory in the extreme. In process "A" the strain was, with the grain 68 tons per square inch, across the grain 32 tons, "B" with the grain 50 tons, across the grain 48 tons; "C" with the grain 38 tons, across the grain 56 tons. During experiments with the three processes it was shown that the steel, while cold, would bend double without the slightest flaw, and this either with or across the grain. The heated metal would also bend across the grain, and then, after being doubled, would bend back with the grain; while the plates were afterwards punched, in order to test if the fabric had been in any way injured by heating, and were then found thoroughly sound and pliable. These results were of the most astonishing description, and steel has long been considered the most obstinate metal with which to deal; but when we add that it can now be welded, and the cold metal clipped and niched after being bent in a heated condition, the great importance of the invention may more easily be apparent.

Equally satisfactory results were seen from the samples of boiler-plates, nut, rivet, and engine-iron, manufactured by Messrs. Hawks, Crawshaw, and Son, Gateshead Iron Works; Sir William Armstrong and Co.'s Ridsdale pigs, knots tied in iron, fully showed its extraordinary pliability, while thick bars were also bent quite close round a small iron rod without breaking. Mr. William Jackson, of the Bank-buildings, Newcastle, exhibited several improved kinds of Norris and Co.'s machine bands, laces, and ropes, made from Helvetia leather, and which were said to be much lighter, stronger, and more durable than any other kind; Deur's patent wood packing, for glands of steam and hydraulic machinery; and Mr. Straker's pressed and hollow brick, for building purposes, were also exhibited on the same stall, and did not fail to receive fitting inspection. Steam-engine and pump packing was packing shown by Mr. J. M. Birmingham's Mechanics' buildings, Newcastle, the greatest recommendation of which was that it required no oil, or grease of any kind, no matter how long it might be used, is clean and durable, and is said to save loss of time and waste of material. It is already used with much advantage in many places in the neighbourhood. Allan's patent improved smoke-preventing fuel-economising furnaces were also shown by the same firm. Fox, Head, and Co.'s non-conducting cement, for preventing the radiation or transmission of heat, as well as Jones's patent pipe and boiler covering for a similar purpose, were fully explained, while an improved vertical boiler from the same firm is worthy of time and space permit, of more than a passing notice. The invention is the production of a foreman boiler-maker, and is the result of 30 years' experience in the workshops of several noted boiler-makers. It is constructed to contain a much larger amount of heating surface in proportion to its cost than any known form of boiler suitable for the same purposes, and about one-third more than that of the ordinary form of stack-boilers with cross tubes, while the heating surface is arranged in such positions as most readily to get rid of steam immediately on its formation, and thus by a free and active circulation of water avoiding all danger of damage to the plate from the spheroidal action of the globules of steam. Every fitting seems to be carefully managed and applied, and the whole thing made as complete as mechanical ingenuity can devise.

The chair was occupied by Mr. Williams, and a paper was read by Mr. John Jones, "On the Position of the Iron Trade in Relation to Technical Education." Mr. Jones said that during the last two years a great deal has been said and written about the position and prospects of the British iron and associate industries. It is generally admitted that the manufacturing of this country must bestir themselves if they are to compete successfully with their continental rivals, prohibitory tariffs, and the comparatively educated masters and workmen available in other countries. In face of the striking facts which at this time threaten the position of the British iron trade, local prejudices and traditional jealousies ought to be set aside, and those connected with the iron trade ought to meet on higher ground, where it might be practical to discuss calmly the common interest of this great industry. Mr. Jones, at the conclusion of his paper, proposed the formation of a society of ironworkers, and others closely connected with the trade, the members to meet at stated intervals, papers to be read, models to be shown, &c.; and this project was approved of, and a committee consisting of the following gentlemen was formed to carry the idea out to a practical issue:—Messrs. Edward Williams, Middlesborough; Isaac I. Bell, Newcastle; David Dale, Darlington; J. Morrison, Newcastle; J. J. Smith, Barrow; W. Fletcher, Workington; — Pattison, Harrington; J. Lancaster, Wigan; G. J. Barker, Wolverhampton; W. Williams, Tipton; William Matthews, Dudley; W. S. Roder, Stoke; R. Heath, Stoke; W. Menclans, Dow-la; A. Brogden, Tond; R. Fothergill, Merthyr; F. Kitson, Leeds; J. G. N. Alleyne, Buttery; Sir Jno. Brown, Sheffield; Mr. Nelson, Glasgow; B. Samuelson, Banbury; Jno. Jones, Middlesborough. Mr. Jones was requested to convene a meeting of the provisional committee at Birmingham, on Oct. 8, for the purpose of drawing up rules and making arrangements for the opening meeting of the Institute.

There can be no doubt that the proposed Institute if it succeeds will prove of the greatest benefit to the trade generally, as all similar institutions have been the means of rapidly extending the knowledge of new inventions and appliances, and thus saving time and labour to an incalculable extent. The object of the

society would be to draw into one focus everything relating to the Imperial, as distinguished from the local interests of the trade. It must also be recollected that the tendency of these institutions is to encourage, and even originate, new inventions, so that the benefit derived from them is not easily to be estimated. The Chairman stated that, in his opinion, the time had not arrived for pushing forward the great movement for imparting technical education, but that rather the imparting of elementary education should be aimed at, as the great bulk of the working classes are yet destitute of the rudiments of knowledge. This, however, appears to be a misconception, as anyone intimately acquainted with the miners and mechanics in the North knows that there is a very large class of men who are quite ripe for technical education, and there is a great want of this, which is most seriously felt. At the same time, if the means for imparting this kind of education is provided (that is, technical education) this circumstance need not retard the movement for general elementary education, which is also most urgently required.

Mr. I. L. Bell then submitted a most elaborate paper, "On the Foreign Relation of the Iron Trade." The conclusion arrived at by Mr. Bell is that the iron trade of this country is in a position to compete with that of any other country. On the whole, although labour is cheaper in foreign countries, iron is produced cheaper here; this is owing to the cheapness of coal, and superior machinery and appliances. Some idea may be formed of the value of Mr. Bell's paper, from the fact that he collected the materials for it at the works of France, Belgium, &c.; it is only, therefore, an account of his own personal observations and experience. It is quite obvious, from the facts he adduces that, owing to the position of the coal and iron ore fields of the Continent, as compared with those of England, that if the principles of free trade were generally recognised the latter country would have little difficulty in competing with the former in the markets of the world. The quantity of coal raised in Great Britain is vastly larger than that raised in France, indeed the latter country imports just about the quantity of coal that is consumed by the iron furnaces, a most important consideration. The situation of the coal and ore fields in France causes a very considerable expense in the transit of the raw material to the smelting-furnaces. The quantity of work done by any given number of men in France is considerably less than that done by a similar number of men in England, so that the rate, or at any rate the cost, of wages is rather less in England than in France. On a full consideration of the whole subject, Mr. Bell comes to the conclusion that iron can be produced in this country at a lower rate than on the Continent. With respect to the education of the men, he does not think that the workmen of any given class abroad have obtained any scientific education of a superior kind to that received by the men here; at the same time, he appears to conclude that the superior officers abroad have, as a rule, received a superior education to the same class of men here.

After the dinner, which took place at the close of the meeting, was concluded, Mr. Bell expressed himself hopefully as to the future of the iron trade, giving his opinion that the giant was only sleeping, or taking a rest, and that all should be on the alert, to be ready to extend the iron trade which would be scattered forth in profusion when he is again aroused. Mr. Williams dwelt particularly on the necessity for general elementary education being given to the rising generation. Mr. Morrison made a most extraordinary speech, commencing by noting the working men of the Tyne, such as Stephenson, Armstrong, &c., who by the exercise of great genius and energy, and in spite of the position in which they were placed, having little elementary education, and no technical knowledge at the commencement of their career, yet raised themselves to the highest pinnacle of fame as inventors. He proceeded to sneer at the idea of an educated working man, or philosopher as he called him, at the present time. His short speech is full of contradictions and fallacies, and it certainly found little favour. Education, as a rule, improves all classes of men, but a slight smattering of learning does, in some cases, produce harm, as sufficient learning has not been imparted. However, allowing for drawbacks, elementary education is becoming more general every day, and the friends of compulsory education are increasing in number daily. The formation of classes for technical or scientific education are not progressing as well as they ought to in the locality, still some are being formed, and, as the subject becomes better understood, we have no doubt that the system so well explained lately by Mr. Buckmaster will be brought largely into practice.

NORTH OF ENGLAND INSTITUTE OF MINING ENGINEERS.—A general meeting of members will be held on Saturday, when several new members are to be elected, and the Technical Education Committee will present their report. Mr. W. Boyd will read a paper "On Riveting, with a description of a New Portable Riveting Machine;" and Mr. T. F. Spencer will read a paper entitled "Remarks on the Torsional Strain on Shafting."

REPORT FROM DERBYSHIRE AND YORKSHIRE.

OCT. 1.—There is very little alteration to be noted with regard to the Coal and Iron Trades of Derbyshire, both of which remain in about the same state as when last noticed. The foundries appear to be kept moderately well going, there being a few orders for some descriptions of castings, whilst the demand for rails and plates at the principal establishments is by no means active. The number of furnaces in blast is about the same as it has been for some months past, and although the quantity of pig turned out has not been equal to what could be produced if necessary, it appears that makers have been depending more than formerly on their own ore, although it is generally supposed that a mixture of foreign stone with the native produces a better quality of iron. The steel works are kept fairly working, but there has been no great improvement with regard to them of late. The Coal Trade is now looking much better, and a larger tonnage is now being forwarded to London and the South, especially from Clay Cross, Eckington, Pinxton, and other places. From Staveley, and from the Messrs. Wells, a fair business is being done with Grimby for exportation, but which it is not expected will last much longer, as a good many vessels will ere long cease running to the North of Europe. House and gas coal is being sent in considerable quantities to Birmingham and other large towns on the Midland Railway; the Derbyshire owners, having a good deal of the trade to those places in their own hands, have nothing to fear from their Northern rivals, who are too far removed from them to be in the slightest degree dangerous. From Church Gresley and the neighbourhood business is better than it has been, and a larger quantity of coal is being forwarded to the West of England, a small tonnage going in that direction nearly as far as Gloucester, near to which there are several collieries. The land sale is also improving, and will continue to do so as the season advances. For coke there is a fair demand, so that the consumption keeps pace with the quantity made. Sinking operations continue to be pushed forward in most parts of the district, more especially to the North, going towards Sheffield, where a good deal of mineral property has been opened out, and new colliery districts will in the course of a year or two be found within five or six miles of the former town, provided as the neighbourhood will be with good railway accommodation and markets for their produce.

The Sheffield Iron and Steel Trades are without alteration, some of the heavier branches doing tolerably well, while the lighter ones are only moderately well supplied with orders. However, continuing in good request, whilst there is considerable activity in connection with some of the establishments engaged in the production of railway material. The town is kept in a high state of agitation just now by the candidates seeking the honour of representing the men of Sheffield in Parliament, and a good deal of angry warfare is carried on by the local papers. One of the candidates, Mr. Mundella, appears to be a man of peace, and considers that a very large saving might be effected in the national expenditure by limiting the supply of war materials. To this his opponent sniffs that his love of peace would lead him to do away with such establishments as the Messrs. Brown (Limited) and Cammell and Co., where the vast iron plates are made, and in the production of which, for the necessary defences of the country, many hundreds of men are employed. Mr. Mundella has the support of most of the Trades Unions, whilst Mr. Roebuck, whom he opposes, has rendered himself a terror to evil-doers by his exposure of the proceedings of many of the trades in his capacity of a member of the Trades Committee.

In South Yorkshire the Iron Trade continues in a very healthy state, at nearly all the works there being a good demand for most qualities of manufactured iron, including rails, sheets, and plates. The same also may be said with regard to Bessemer steel, for which there are some very considerable orders in hand. Coalmasters are just now much busier than they have been for a considerable time past, and there is much more doing with London, notwithstanding the fact that as yet there has been no alteration in the traffic rate by the Great Northern. Silskote house coal and nuts are in steady request for the South as well as the home districts. During the week there has been an increase in the tonnage going to Hull, as the merchants are pushing the loading of their vessels. In the hope that they may be able to make another voyage on their return from the Baltic before the ice sets in for the season. To Grimby, also, there is rather more doing in steam qualities, both for the North of Europe and for the home ports. Coke is without alteration, there being a demand for all that is made, a large proportion finding its way into Lincolnshire and Derbyshire.

Another serious colliery explosion has occurred through the incautious use of an unprotected light. At the Swan Lane Colliery, near Wigan, the manager, underlooker, and a fireman went to a new cutting for the purpose of "measuring up," and as soon as the foremost of the party entered the level the gas flared, at the naked candle which he was carrying. The three men were all seriously injured. Proceedings will be taken against the fireman, whose duty it was to have inspected the workings that morning.

The blast-furnaces of the Wingerworth Iron Company, Chesterfield, which have continuously been kept going for 22 years, are now blown out, and the works undergoing repairs, consequently upon the renewal of the company's lease. It will probably require three months to complete the alterations necessary to placing them upon the most approved modern basis.

SOUTH YORKSHIRE COALOWNERS' ASSOCIATION.—The quarterly meeting of this association was held on Tuesday at the King's Head Hotel, Barnsley, where there was a very good attendance of the members. The principal matter discussed was that relating to the memorial presented to the directors of the Great Northern Railway some five months ago, asking for a reduction of the present rate to London. It was stated that owing to the charge for conveying coal from the South Yorkshire district to the metropolis being so high the coalowners were unable to compete with those in the Northern and Derbyshire coal fields. Much surprise was also expressed that the memorial had not experienced that consideration at the hands of the directors which it was entitled to, seeing that Yorkshire sends considerably more coal by the Great Northern to all the other districts than any other county. It was resolved that the memorial of the company should be again directed to the subject of the memorial. It was also agreed that the Manchester, Sheffield, and Lincolnshire Company

should be communicated with on the subject of their rate to Doncaster. The present rate from the Barnsley district, average fourteen miles to Doncaster, is 1s. 3d., which is very high for the distance. A deputation from the governors of the Barnsley Dispensary, asking for aid towards the endowment of an infirmary about to be added to the present building, was received, and it was agreed that the coalowners should subscribe in their individual capacity. Several of the gentlemen present put their names down for various sums. The proceedings terminated with a vote of thanks to the Chairman.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

OCT. 1.—The week between the Preliminary Meeting of Ironmasters and the Quarterly Meetings is always a dull one. There is no reason to say there is any change in the demand for iron, but, perhaps, rather fewer orders have been received this week. It is a singular fact that the exports of iron in August last were so much below the corresponding month in last year. Taking quantities, we find that in August last year we exported 183,047 tons, or 19,264 less than in 1867, and the decline applies to every sort of iron except "castings" and "wrought of all sorts," meaning other sorts than those important enough to be distinctly specified. For the whole eight months of the year there is a very slight decline. Probably the export for August was affected by exceptional influences. The attempts of the men in North and South Staffordshire to obtain an advance of wages appear to have been abandoned for the present. It must be evident that this is not the time to make it.

A terrible boiler explosion occurred on Monday night about seven o'clock at the Moxley Steel and Iron Works, of Mr. Thomas Wells, which are between Bilston and Darlaston, and the result is that 11 men and boys are already dead, and 4 more are given over as sure to succumb under their injuries. The explosion was heard two miles off, and portions of the boiler and the buildings were carried off—the tops of houses 100 yards away. The boiler which burst was one of four which supplied the engine of the forge with steam. It was worked by the heat from four puddling-furnaces, and the furnaces were grouped around it, so that the puddlers who were at work were in the very centre of the fearful force which rent it to pieces. The boiler was upright, with egg-shaped ends, 22 ft. high and 10 ft. in diameter, and had been in use for 14 years. It was repaired only a month before the accident, and the whole of the bottom was removed two years and a-half ago. Mr. Charles Wells, son of the proprietor, in stating these facts at the inquest, added that each of the boilers had two safety-valves, one 5 in. and the other 6 in. in diameter, and there was also a 6-in. main safety-valve applied to the whole of the boilers, which were connected, and which kept them at a pressure of 34 lbs. to the square inch. He said it was clear that the boiler was not short of water, as the scurf still remained on the plates. Mr. Wells, the proprietor of the works, who is a thoroughly practical man said the boiler was made of Shropshire plates, and was constructed on the best possible principles, and he was quite at a loss to account for the explosion. The boiler was not insured, nor under the inspection of any society. It is, however, due to Mr. Wells to say that the works have been carried on for 23 years with a singular exemption from accidents, only one man having lost his life there, which was in last January, through getting his arm caught in the shears. An enquiry has been opened by two coroners, and one closed, so as to leave to the other the task of unravelling, if possible, the cause of this terrible accident. Mr. E. J. Wright, who is an extensive maker of boilers, and Mr. E. B. Marten, chief engineer of the Midland Steam-Boiler Association, have examined the remains of the boiler, with a view, if possible, to come to a conclusion as to the cause of its bursting. Mr. Wells has afforded relief to the bereaved families, and the means of burying the dead.

There is in South Staffordshire and East Worcestershire a society, presided over by Lord Lyttelton, for the purpose of promoting the education of youths, who have gone to work, in evening schools. The annual meeting was held on Monday, at Bilston, and among the topics discussed naturally was the effects of the Factory Acts and the Workshops Regulation Act in promoting education in the district. The universal opinion was that the result was most disappointing to those who expected any benefit from those measures. It is an old tale, told in this letter long before the Acts were passed, and is just this, that the Workshops Regulation Act is a dead letter, because there is no one to carry it out, and the Factory Acts, which only apply to the larger works, cause many children to leave the best regulated manufactories, where their labour is restricted, and resort to the wretched garrets and narrow, low shops, in which many men work with a few lads, and, perhaps, girls. The only defence for the legislation of last session conceivable is, that the larger manufacturers were to be coerced, so as to induce them, as members of local government bodies, to put the Workshops Regulation Act into operation, and so serve their smaller competitors the same as they were served. As yet this has not followed, and any attempt by a local governing body to enforce the Workshops Regulation Act would almost certainly lead to their non-election when next they had to appeal to the ratepayers.

NORTH STAFFORDSHIRE COAL AND IRONMASTERS' ASSOCIATION.

The quarterly meeting of this association was held at Stoke-upon-Trent, on Thursday. There was a good attendance. Orders were reported to be less numerous for finished iron than was the case a few weeks ago, and there was a unanimous opinion that the present state of the trade would not warrant any resolution in favour of an advance in price. The demand for pig-iron was stated to have become less active, buyers having for the most part supplied their requirements up to the end of the year. Stocks of pigs, however, are lower than usual, and the make is going into consumption with tolerable regularity for the present, though the requirements of the forge will, probably, diminish somewhat before the end of the year. In ironstone the tone of the market is slightly less adverse to sellers, there being a little reaction from the excessive depression which has for a long time prevailed. At the same time, nothing but an increase in the make of pig-iron can impart activity to this department of the trade. The trade in coal for domestic use continues much depressed, as it has been throughout the past summer, and for manufacturing purposes there is not at present any very marked improvement. The meeting discussed the operation of the Factory Acts in iron works, and the hardships thereby imposed upon youths under 13 years of age, who were deprived of their means of livelihood. A letter which appeared in the Birmingham Daily Post of Sept. 27, signed "Henry Beaumont," was read, and was considered to give a fair illustration of the question. The ironmasters present adduced many similar cases within their own knowledge, and the secretary was requested to call the attention of the members for North Staffordshire and Stoke-upon-Trent to the subject.

THE PENDLEBURY COLLIERY.

We have already given some general particulars of the excursion of the members and friends of the Incorporated Association of Mine Agents of South Staffordshire and East Worcestershire, and now add some additional information respecting their visit to the far-famed Pendlebury Colliery, near Manchester.

Having arrived at the colliery, the party were met by the proprietors, and a hearty welcome accorded them. The Pendlebury Colliery comprises several very extensive coal-winding plants, and contains about 6000 acres of coal ground, and has been raising coal by the family of the present enterprising proprietors for the last 100 years. The present capabilities of the collieries belonging to the firm are about 20,000 tons per week in good trade, and the quality is suited both for home coal, furnaces, and coking purposes. There are eight workable seams of coal—the Bin Mine, Shuttle Mine, Crumbeke Mine, Rams Mine, Dow Mine, Five-quarters Mine, Trenchebone Mine, and Cannel Mine. The two principal winding plants selected for inspection were the Pendlebury and Pendleton. The Pendlebury pits are situated about 4 miles from the centre of the city of Manchester, are about 400 yards deep to the coal called the Rams Mine, and raise about 800 tons per day. The winding engine is a vertical, direct-acting, high pressure, having a 36-in. cylinder, and worked by six boilers. These pits, 10 ft. diameter, have been driven out on the level course, 1700 yards on one side the pit and 1400 on the other, and are now working the Shuttle Mine, about 3 feet thick, the Crumbeke Mine, about 4 ft. thick, and the Rams Mine, about 7 ft. thick. The ventilation is about 100,000 cubic feet of air per minute. At these pits there is an underground high-pressure, horizontal, direct-acting pumping engine employed, which works a double-acting 7-in. ram, 6 ft. stroke, fixed on each end of the piston-rod, and forces the water up a rising 9-in. main, in one column, 320 yards long, to the surface, thereby doing away with the expensive and cumbersome mode of lifting the water by the old method of rods, buckets, &c. The seven strokes per minute, and is fed by two double-rod Cornish boilers, 27 feet by 7 ft., placed underground, has been at work 12 months, and answers admirably. This splendid piece of machinery was inspected by the visitors with eager interest, and considerable discussion arose upon it. The apparent ease, cleanliness, entire freedom from noise or jarring, and the apparent economy of the principle over the old method of pumping, was the theme of admiration of all present. Mr. Robert Millington Knowles, the Inver, was present, and lucidly explained all the workings parts. The absence of any vessel seemed to astonish the parties present, but it was stated that by the adoption of Osborn's patent valves (large area and small opening) the necessity for the compressed air chamber was obviated, and all concussion of the valves prevented. The beat of the valves could not be heard, although a pressure of 400 lbs. to the square inch was upon them every time they opened and shut. A clack with a very large area and small opening was placed at the bottom of the main rising column at the pit bottom, which, of course, sustained all the weight of the rising column. A constant flow of water was passing out at the pit top equal to 140 gallons per minute.

After the party came to bank the whole of the working plans of this extensive colliery were in the most unreserved manner placed before them, and all the details lucidly explained by Mr. John Knowles. The extent of the workings and freedom from faults contrasted very favourably with the mines of South Staffordshire. The party then drove off to the Pendleton Pits, which are two miles from Manchester, and close to the town of Pendleton. These pits are 8 ft. diameter, and 520 yards deep to the Rams Mine. They are raising about 800 tons per day, and are getting the same coils as at the Pendlebury Pits.

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 ALSO, MANUFACTURERS OF BLAST ENGINES, COLLIERY AND ALL OTHER DESCRIPTIONS OF STATIONARY
 ENGINES AND BOILERS, MILL GEARING, &c.

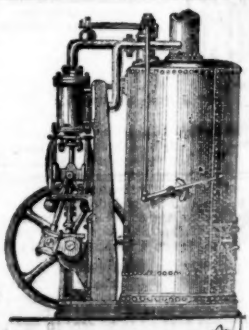
PARIS EXHIBITION, 1867, GOLD MEDAL.
CLAYTON, SHUTTLEWORTH, AND CO.,

At the Great Triennial Trials of the ROYAL AGRICULTURAL SOCIETY OF ENGLAND, held at Bury St. Edmunds, July, 1867,
 received the following AWARDS:—
 For Single Cylinder Portable Steam Engine, -THE FIRST PRIZE OF £25.
 For Double Cylinder Portable Steam Engine, -THE FIRST PRIZE OF £25.
 For Horizontal Cylinder Fixed Engine, -THE FIRST PRIZE OF £20.
 For Double Blast Finishing Thrashing Machine, -THE PRIZE OF £15.
 Also, THE SOCIETY'S SILVER MEDAL for ADJUSTING BLOCKS for Machines.

The duty performed by all C. S. and Co.'s Engines on this occasion considerably exceeded that of any others. C. S. and Co. refer
 with pleasure to the fact that the duty of their "Commercial" or Single Valve Engine at Chester, so long ago as 1858, was not
 equalled by any "ordinary" Engine at Bury.

CLAYTON, SHUTTLEWORTH, AND CO., LINCOLN;
 And 78, LOMBARD STREET, LONDON.

DAVIS AND PRIMROSE,
 LEITH, N.B.,
STEAM HAMMERS,
 1½ cwt., 3 cwt., and 5 cwt., sizes, always in stock or progress.
ENGINES AND BOILERS COMBINED,
 From 2 to 20-horse power. Small sizes usually ready for delivery.
PUMPING AND WINDING ENGINES,
CRANES, HOISTING MACHINERY, &c.



TO COLLIERY PROPRIETORS.
 UPWARDS of 6000 LARCH, 4000 OAK POLES, 100 OAK and
 OAK PLANKS upwards of 20 feet long; ELM COAL-PIT RINGS, ready
 out, in stock.
 All kinds of ENGLISH TIMBER supplied in the round, and OAK and LARCH
 SCANTLING cut to sizes for railway and coal-wagon building.
 Dealer in all kinds of BRITISH TIMBER.
 MILLWRIGHTS, ENGINEERS, COACH BUILDERS, WHEELWRIGHTS,
 &c., supplied on the most reasonable terms.
 JAMES ATKINSON,
 No. 63, GRANBY ROW, MANCHESTER.

TO CAPITALISTS, RAILWAY CONTRACTORS, BUILDERS, BRICK, TILE,
 GLAZED PIPE MANUFACTURERS, AND OTHERS.
THE LITTLE MOUNTAIN COLLIERY COMPANY
 Are PREPARED TO SUPPLY, on very advantageous terms, FIRE-CLAYS well
 adapted for the MANUFACTURE of WHITE-FACED BRICKS for fancy build-
 ings; likewise FURNACE BRICKS, GLAZED SANITARY PIPES, FLOORING
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 Coal can be had on the spot at a low rate, and brick works can be erected on
 the company's land at BUCKLEY, FLINTSHIRE. A railway passes through
 the works in DIRECT communication with the River Dee, five miles distant, and
 also with the London and North-Western Railway.
 Samples of bricks can be seen at the office of Mr. J. P. CARTWRIGHT, Solicitor,
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 For further particulars apply to Mr. ALFRED COXON, Little Mountain Col-
 liery, Buckley, near Mold.—Sept., 1868.

IMPORTANT TO ENGINEERS AND FOUNDERS, FOR
 POLISHING BRASS, STEEL, and other purposes; also IMPORTANT as
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MAGNETIC ORE PULVERISED.
 Considerable quantity of the above ore TO BE SOLD, BY PRIVATE CON-
 TRACT. Samples and prices may be had on application to Mr. THOMAS SCOTT,
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WILLIAM HANN AND SON beg to offer to SUPPLY
 COLLIERY OWNERS, and the public generally, with their
PATENT SAFETY LAMP.
 Which has been proved INEXPLOSIVE in a current of gas of 48 feet per second.
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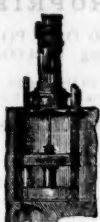
ELFORD, WILLIAMS, AND CO.,
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ELFORD, WILLIAMS, and Co. having erected an assay office, and engaged the
 services of a practical Cornish assayer, who will devote his whole time to this
 branch of their business, they are now in a position to make correct assays of
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TO MANUFACTURERS OF YELLOW METAL.
 MERCHANTS, AND OTHERS.
 CAUTION.

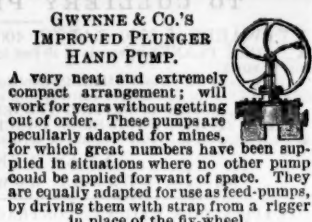
WHEREAS, it has recently come to the knowledge of the
 directors of ELLIOTT'S PATENT SHEATHING and METAL COM-
 PANY (LIMITED) that quantities of YELLOW METAL made by other Manu-
 facturers have been exported to India and elsewhere, bearing a FRAUDULENT
 IMITATION of the exclusive BRAND or TRADE MARK of the company for
 Metal of that description—namely, a representation of a Rupee, with or with-
 out the word "soft" printed thereon,
 NOTICE IS HEREBY GIVEN, that in case any manufacturer, or other per-
 son, shall STAMP, IMPRESS, or AFFIX to or on any YELLOW METAL, not
 made by the said company, the said BRAND or TRADE MARK, or any colour-
 able imitation thereof, -or in case any merchant or other person shall EXPORT
 or SELL any such Yellow Metal so marked as aforesaid, -PROCEEDINGS will
 forthwith be COMMENCED against such manufacturer, merchant, or other
 persons, to RESTRAIN him or them from such wrongful acts as aforesaid, and
 RECOVER DAMAGES in respect thereof.
 RYLAND AND MARTINEAU, Solicitors to the said Company.
 Birmingham, August, 1868.

WELSH SLATE QUARRY.
GREEN AND BLUE SLATE QUARRY.—
 Within 150 yards of a railway-station, and with a main line of railway
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 sible by the same railway to the ship's side.
 The OWNER of this VALUABLE PROPERTY is OPEN to TREAT either
 for PARTNERSHIP or a COMPANY. In either case he desires to retain a
 moiety of the property. There is ample tip, the slates are of the finest colour
 and quality, and the working (without machinery) will be of the most inexpen-
 sive kind. The slates have been proved for a century, but the railway facilities
 have only been recently obtained.
 Apply to Mr. THOMAS HARVEY, Segontium-terrace, Carnarvon.
 14th August, 1868.



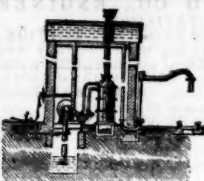
Gwynne & Co.'s DOUBLE-ACTING PUMP-ENGINE.
As supplied to the Admiralty Graving Docks, Malta, to lift from 200 to 2000 gallons per minute. The engine is of inverted vertical cylinder without valves or der construct-

Gwynne & Co.'s IMPROVED CHAIN-PUMP.
Worked direct by Steam-Engine. These pumps work vertical cylinders without valves or der construct-

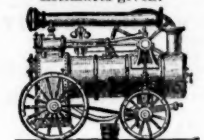


Gwynne & Co.'s IMPROVED PLUNGER HAND PUMP.
A very neat and extremely compact arrangement; will work for years without getting out of order. These pumps are peculiarly adapted for mines, for which great numbers have been supplied in situations where no other pump could be applied for want of space. They are equally adapted for use as feed-pumps, by driving them with strap from a rigger in place of the fly-wheel.

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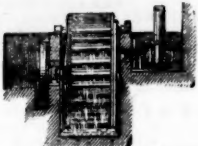
Gwynne & Co.'s PATENT COMBINED STEAM-PUMP.
As Applied to Railway Stations. The vertical boiler supplies the engine with steam, the pump discharging the water lifted from the well into the tank above, whence it may be drawn as occasion requires, for feeding locomotives, washing the carriages, as a fire-engine, &c. Estimates given.



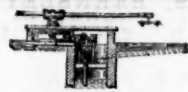
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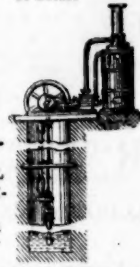


Gwynne & Co.'s IMPROVED VERTICAL STEAM-ENGINE.
Occupies little space, compact, safe, and easy to work. Made from the very best selected materials. Of all powers from 2 to 20 horse.



Gwynne & Co.'s IMPROVED HORIZONTAL HIGH-PRESSURE STEAM-ENGINE.

With or without expansion gear, for economical working. From 4 to 100 h. p.



Gwynne & Co.'s IMPROVED DEEP WELL PUMP.
Worked direct by steam-engine at the mouth of the well. This arrangement is invaluable in situations where, from peculiar circumstances, the centrifugal pump is inapplicable.

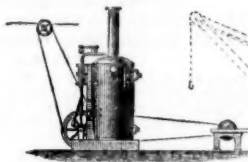
ELEVEN PRIZE MEDALS, taken at the Exhibitions of the Principal Cities of the World, **TESTIFY TO THE GREAT EXCELLENCE OF THIS MACHINERY.**

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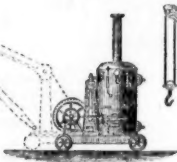
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CHAPLIN'S PATENT PORTABLE STEAM ENGINES AND BOILERS.

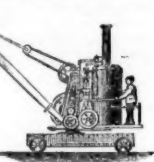
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From 1 to 30-horse power. No building required.



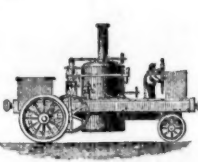
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30 cwt. to 20 tons. For wharf or rail.



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6	1 3/4	4	400	30	11 0 0
7	2	4	600	40	13 0 0
8	2 1/4	4	900	60	15 10 0
9	2 1/2	6	1200	75	17 0 0
10	2 3/4	6	1800	120	19 0 0

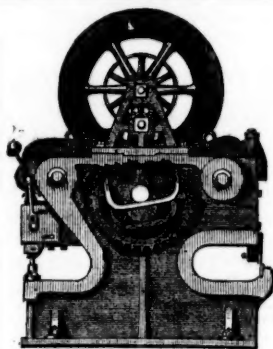
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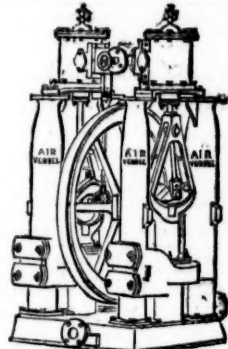
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